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APRIL, 1901

STANFORD UNIVERSITY, CAL.
PUBLISHED BY THE UNIVERSITY

LELAND STANFORD JUNIOR UNIVERSITY

TENTH
ANNUAL REGISTER
1900-01

"The Beneficence of the Creator towards Man on Earth, and the possibilities of Humanity, are one and the same."—LELAND STANFORD.

"A generous Education is the Birthright of every man and woman in America."

STANFORD UNIVERSITY, CAL.
PUBLISHED BY THE UNIVERSITY
APRIL, 1901

CUNNINGHAM, CURTISS & WELCH
SAN FRANCISCO, CAL.

FRANKLIN PRESS

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DIRECTORY

[The rooms in the Inner Quadrangle are numbered consecutively, beginning at the left of the main entrance, ten numbers being allotted to each building. Numbers 120 to 160 are in the Engineering buildings, south of the Quadrangle. The Psychological Laboratory is in the brick building near Escondite Cottage, east of Encina Hall. The Studios are in the frame building south of the Engineering buildings. The Assembly Hall is the first building east of the Memorial Arch in the Outer Quadrangle.]

The office of the *President* is room 112.

The office of the *Registrar* is room 110.

The *Library* occupies the Thomas Welton Stanford Library Building in the outer quadrangle.

The office of the *Medical Director* is room 95.

The various Departmental offices are given in the *Schedule* and in the *Directory of Officers and Students.*

The University Post, Telegraph, and Telephone Office is *Stanford University, California.*

The University Railway Station and Express Office is *Palo Alto, California.*

Requests for *Registers,* blanks, and other printed matter, and inquiries regarding terms of admission, advanced standing, etc., should be addressed to *The Registrar, Stanford University, Cal.*

University Calendar

1900

Sept.	1	Saturday	Entrance Examinations begin.
Sept.	4	Tuesday	Registration of Matriculated Students.
Sept.	5	Wednesday	
Sept.	6	Thursday	Registration of New Students.
Sept.	7	Friday	Instruction begins.
Sept.	14	Friday	Conferring of Degrees.
Nov.	29	Thursday	Thanksgiving Recess.
Dec.	2	Sunday	
Dec.	21	Friday	First Semester ends.

1901

Jan.	4	Friday	Entrance Examinations begin.
Jan.	7	Monday	Registration for Second Semester.
Jan.	8	Tuesday	
Jan.	9	Wednesday	Instruction begins.
Jan.	11	Friday	Mid-Year Conferring of Degrees.
Feb.	22	Friday	Washington's Birthday.
Mar.	9	Saturday	Founder's Day.
Mar.	30	Saturday	Mid-Semester Recess.
April	7	Sunday	
May	14	Tuesday	Memorial Day.
May	23	Thursday	Instruction ends.
May	24	Friday	Entrance Examinations begin.
May	26	Sunday	Baccalaureate Sermon.
May	27	Monday	Class Day.
May	28	Tuesday	Alumni Day.
May	29	Wednesday	Commencement.

Aug.	31	Saturday	Entrance Examinations begin.
Sept.	3	Tuesday	Registration of Matriculated Students.
Sept.	4	Wednesday	
Sept.	5	Thursday	Registration of New Students.
Sept.	6	Friday	Instruction begins.
Sept.	13	Friday	Conferring of Degrees.
Nov.	28	Thursday	Thanksgiving Recess.
Dec.	1	Sunday	
Dec.	20	Friday	First Semester ends.

1902

Jan.	3	Friday	Entrance Examinations begin.
Jan.	6	Monday	Registration for Second Semester.
Jan.	7	Tuesday	

Board of Trustees

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The Hon. George E. Gray,	San Francisco
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* Died June 21, 1893.

Faculty and Other Officers

FACULTY

[*Arranged in groups in the order of seniority of appointment.*]

DAVID STARR JORDAN, President of the University.
Xazmin House, Serra Ave.

M. S., Cornell University, 1872; M. D., Indiana Medical College, 1875; Ph. D., Butler University, 1878; LL. D., Cornell University, 1886. Instructor in Botany, Cornell University, 1871-72; Professor of Natural History, Lombard University, 1872-73; Principal of Appleton (Wis.) Collegiate Institute, 1873-74; Student and afterward Lecturer in Marine Botany, Anderson School at Penikese, 1874; Teacher of Natural History, Indianapolis High School, 1874-75; Professor of Biology, Butler University, 1875-79; Assistant to the U. S. Fish Commission, 1877-91; Professor of Zoology, Indiana University, 1879-85; President of Indiana University, 1885-91; President of the California Academy of Sciences, 1896-98, 1901; U. S. Commissioner in charge of Fur Seal Investigations, 1896-98.

JOHN CASPER BRANNER, Vice-President of the University, and Professor of Geology. *28 Alvarado Row.*

B. S., Cornell University, 1882; Ph. D., Indiana University, 1885. Assistant Geologist, Imperial Geological Survey of Brazil, 1875-78; Special Botanist for Thomas A. Edison in South America, 1880-81; Special Agent of the U. S. Department of Agriculture for Investigating Cotton and the Insects affecting it in Brazil, 1882-83; Topographical Geologist of the Geological Survey of Pennsylvania, Anthracite District, 1883-85; Professor of Geology, Indiana University, 1885-91; State Geologist of Arkansas, 1887-92.

OLIVER PEEBLES JENKINS, Professor of Physiology and Histology. *Cedro Cottage.*

A. B., Moore's Hill College, 1869; A. M., 1872; M. S., Indiana University, 1886; Ph. D., 1889. Professor of Natural Science, Moore's Hill College, 1876-82; Professor of Natural Science, Indiana State Normal School, 1883-86; Professor of Biology, De Pauw University, 1886-91.

MELVILLE BEST ANDERSON, Professor of English Literature.
Menlo Park.

A. M., Butler University, 1877. Professor of Modern Languages, Butler University, 1877-80; Professor of English Literature, Knox College, 1881-86; Professor of Literature and History, Purdue University, 1886-87; Professor of the English Language and Literature, University of Iowa, 1887-91.

JOHN MAXSON STILLMAN, Professor of Chemistry.
2 Alvarado Row.

Ph. B., University of California, 1874; Ph. D., 1885. Assistant in Chemistry, University of California, 1873-75; Student in Chemistry, Strassburg and Würzburg, 1875-76; Instructor in Organic and General Chemistry, University of California, 1876-82; Chemist of the Boston and American Sugar Refining Company, 1882-92.

FERNANDO SANFORD, Professor of Physics.
450 Kingsley Ave.

B. S., Carthage College, 1879; M. S., 1882. Student, University of Berlin, 1886-88; Professor of Physical Science, Mt. Morris College, 1879-82; Superintendent of Schools, Ogle County, Ill., 1882-86; Instructor in Physics and Chemistry, Englewood High School, 1888-90; Professor of Physical Science, Lake Forest University, 1890-91.

CHARLES DAVID MARX, Professor of Civil Engineering.
345 Kingsley Ave.

B. C. E., Cornell University, 1878; C. E., Karlsruhe Polytechnicum, 1881. Instructor in Civil Engineering, Karlsruhe Polytechnicum, 1880-81; U. S. Assistant Engineer, Missouri River Improvement, 1882-84; Assistant Professor of Civil Engineering, Cornell University, 1884-90; Professor of Civil Engineering, University of Wisconsin, 1890-91.

ERNEST MONDELL PEASE, Professor of the Latin Language and Literature. *6 Alvarado Row.*

A. B., University of Colorado, 1882; A. M., 1885. Fellow in Johns Hopkins University, 1884-86; Student at Bonn, 1885-91; Instructor in Latin, Smith College, 1886; Professor of Latin, Bowdoin College, 1886-91.

CHARLES HENRY GILBERT, Professsor of Zoology.
433 Melville Ave.

B. S., Butler University, 1879; M. S., Indiana University, 1882; Ph. D., 1883. Assistant in Natural Sciences and Modern Languages, Indiana University, 1880-84; Professor of Natural History, University of Cincinnati, 1884-88; Professor of Zoology, Indiana University, 1888-91; Assistant to the U. S. Fish Commission, 1880-91.

DOUGLAS HOUGHTON CAMPBELL, Professor of Botany.
31 Salvatierra St.

Ph. M., University of Michigan, 1882; Ph. D., 1886. Teacher of Biology, Detroit High School, 1882-86; Student at Bonn, Tübingen, and Berlin, 1886-88; Professor of Botany, Indiana University, 1888-91.

†THOMAS DENISON WOOD, Professor of Hygiene and Organic Training. [*In Europe.*]

A. B., Oberlin College, 1888; A. M., 1891; M. D., College of Physicians and Surgeons, New York City, 1891. Director, Oberlin College Gymnasium, 1886-88.

†ALBERT WILLIAM SMITH, Professor of Mechanical Engineering.
[*New York City.*]

B. M. E., Cornell University, 1878; M. M. E., 1886. Machinist and Contractor with Brown & Sharp Mfg. Co., Providence, R. I., 1879-80; Machinist and Shop Foreman, Straight Line Engine Works, Syracuse, N. Y., 1880-83; Superintendent, Kingsford Foundry and Machine Works, Oswego, N. Y., 1883-86; Fellow in Mechanical Engineering, Cornell University, 1886-87, Assistant Professor, 1887-91; Professor of Machine Design, University of Wisconsin, 1891-92.

EWALD FLÜGEL, Professor of English Philology.
1153 Cowper St.

Ph. D., University of Leipzig, 1886. Student, Universities of Freiburg and Leipzig, 1882-88; Privat Docent, University of Leipzig, 1888-92.

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† Absent on leave, 1900-01.

CHARLES BENJAMIN WING, Professor of Structural Engineering.
345 Lincoln Ave.

C. E., Cornell University, 1886. Fellow in Civil Engineering, Cornell University, 1886-87, Instructor, 1887-90, Assistant Professor, 1890-91; Engineer, Pompton (N. J.) Powder Co., 1887, Phoenix Powder Co., Farmingdale, N. J., 1888; Assistant Engineer, Berlin (Conn.) Iron Bridge Co., 1889-90; Professor of Bridge and Hydraulic Engineering, University of Wisconsin, 1891-92.

FRANK ANGELL, Professor of Psychology.
1005 Bryant St.

B. S., University of Vermont, 1878; Ph. D., University of Leipzig, 1891; L. H. D., University of Vermont, 1892. Teacher in Washington (D. C.) High School, 1880-87; Assistant Professor of Psychology, Cornell University, 1891-92.

LEANDER MILLER HOSKINS, Professor of Applied Mathematics.
1027 Bryant St.

B. C. E. and B. S., University of Wisconsin, 1883; M. S., 1885; C. E., 1887. Instructor in Engineering, University of Wisconsin, 1885-89, Assistant Professor of Mechanics, 1889-91, Professor of Theoretical and Applied Mechanics, 1891-92.

†ROBERT EDGAR ALLARDICE, Professor of Mathematics.
[*In Europe.*]

A. M., University of Edinburg, 1882. Baxter Scholar in Mathematics, University of Edinburg, 1882-83, Drummond Scholar in Mathematics, 1883-84; Assistant Professor of Mathematics, University of Edinburg, 1883-92.

WILLIAM RUSSELL DUDLEY, Professor of Botany.
18 Alvarado Row.

B. S., Cornell University, 1874; M. S., 1876. Student, Summer School, Penikese, 1874, Harvard University, 1876, Universities of Strassburg and Berlin, 1887-88; Instructor in Botany, Cornell University, 1872-76, Assistant Professor, 1876-92.

AUGUSTUS TABER MURRAY, Professor of Greek.
1019 Bryant St.

A. B., Haverford College, 1885; Ph. D., Johns Hopkins University, 1890. Fellow in Johns Hopkins University, 1887-88; Professor of Greek, Earlham College, 1888-90; Student, Universities of Leipzig and Berlin, 1890-91; Professor of Greek, Colorado College, 1891-92.

JULIUS GOEBEL, Professor of Germanic Literature and Philology.
1247 Cowper St.

Ph. D., University of Tübingen, 1882. Student, University of Leipzig, 1879-81; Instructor in German, Johns Hopkins University, 1885-88; Editor *Belletristisches Journal*, 1888-92.

NATHAN ABBOTT, Professor of Law.
Menlo Heights.

A. B., Yale University, 1877; LL. B., Boston University, 1893. Professor of Law, University of Michigan, 1891-92; Professor of Law, Northwestern University, 1892-94.

JOHN ERNST MATZKE, Professor of the Romanic Languages.
8 Alvarado Row.

A. B., Hope College, 1882; Ph. D., Johns Hopkins University, 1888. Professor of French, Bowdoin College, 1889-90; Professor of the Romanic Languages, Indiana University, 1890-91; Associate in the Romanic Languages, Johns Hopkins University, 1891-93.

† Absent on leave, 1900-01.

GEORGE MANN RICHARDSON, Professor of Organic Chemistry.
40 Alvarado Row.

A. C., Lehigh University, 1886; Ph. D., Johns Hopkins University, 1890. Instructor in Quantitative Chemical Analysis, Lehigh University, 1888-89; Fellow in Chemistry, Johns Hopkins University, 1889-90; Instructor in Organic Chemistry, Lehigh University, 1890-91.

JAMES OWEN GRIFFIN, Professor of German.
32 Alvarado Row.

Graduate of the Pennsylvania State Normal School, 1873. Teacher in Pennsylvania State Normal School, 1873-74; Principal, Unadilla (N. Y.) Academy, 1874-79; Student, University of Göttingen, 1879-80; Principal of Delaware Academy (Delhi, N. Y.), 1880-85; Instructor in German, Cornell University, 1885-91, Registrar, 1890-91.

WALTER MILLER, Professor of Classical Philology, and Secretary of the Faculty. *College Terrace.*

A. M., University of Michigan, 1884. Student, University of Leipzig, 1884-85, 1889-91; Member of the American School of Classical Studies at Athens, 1885-86; Instructor in Greek, University of Michigan, 1886-87, Instructor in Latin and Sanskrit, 1887-88, Acting Assistant Professor, 1888-89; Senior, Royal Archeological Seminary, University of Leipzig, 1890-91; Associate Professor of Greek, University of Missouri, 1891-92.

RUFUS LOT GREEN, Professor of Mathematics.
19 Salvatierra St.

B. S., Indiana University, 1885; A. M., 1890. Instructor in Mathematics, Indiana University, 1885-86; Student, Johns Hopkins University, 1886-87; Professor of Pure Mathematics, Indiana University, 1887-93.

†ARLEY BARTHLOW SHOW, Professor of European History.
[*In Europe.*]

A. B., Doane College, 1882; Graduate, Andover Theological Seminary, 1885; A. M., Doane College, 1892. Pastor, Congregational Church, Waco, Neb., 1885-87; Professor of History and English Literature, Doane College, 1887-92.

ORRIN LESLIE ELLIOTT, Registrar.
24 Alvarado Row.

Ph. B., Cornell University, 1885; Ph. D., 1890. Fellow in History and Political Science, Cornell University, 1885-86, Instructor in English, 1886-91, Assistant Registrar and President's Secretary, 1890-91.

VERNON LYMAN KELLOGG, Professor of Entomology.
31 Salvatierra St.

B. S., University of Kansas, 1889; M. S., 1892. Student, Cornell University, 1891, University of Leipzig, 1893; Assistant Professor of Entomology, University of Kansas, 1890-93, Associate Professor, 1893-94.

BOLTON COIT BROWN, Professor of Drawing and Painting.
374 Kingsley Ave.

B. P., Syracuse University, 1885; M. P., 1889. Instructor in Freehand Drawing, Cornell University, 1885-88; Principal, Fine Art Department, Government Art School and Parkdale Art School, Toronto, 1889-90; Instructor in Art, Buchtel College, 1890-91.

† Absent on leave, 1900-01.

JAMES PERRIN SMITH, Professor of Mineralogy and Paleontology.
1035 Bryant St.

A. M., Vanderbilt University, 1886; Ph. D., University of Göttingen, 1892. Assistant Geologist and Chemist, Arkansas Geological Survey, 1887-90.

LIONEL REMOND LENOX, Professor of Analytical Chemistry.
Castro.

Ph. B., Columbia College, 1888. Assistant Chemist, Bethlehem Iron Co., 1887; Instructor in Chemistry, Lehigh University, 1888-91; Chemist, Ordnance Department, U. S. N., Washington, D. C., 1891-92.

HENRY RUSHTON FAIRCLOUGH, Professor of Classical Literature.
12 Alvarado Row.

A. B., University of Toronto, 1883; A. M., 1886; Ph. D., Johns Hopkins University, 1896. Fellow in Classics, University College, Toronto, 1883-84; Classical and English Master, Brockville High School, 1884-86; Graduate Scholar, Johns Hopkins University, 1886-87, Fellow, 1887; Lecturer in Greek and Ancient History, University College, Toronto, 1887-93.

HENRY BURROWES LATHROP, Professor of Rhetoric and Forensics.
918 Cowper St.

A. B., Harvard College, 1889. Assistant Professor of English, Hobart College, 1889-90; Instructor in English, Harvard University, 1890-92.

ALPHONSO GERALD NEWCOMER, Associate Professor of English.
Forest Court.

A. B., University of Michigan, 1887; A. M., Cornell University, 1888. Fellow in Classics, Cornell University, 1887-88; Principal, Mt. Morris (Ill.) H. S., 1888-89; Instructor in Latin and French, Knox College, 1889-91.

ARTHUR BRIDGMAN CLARK, Associate Professor of Drawing.
College Terrace.

B. Ar., Syracuse University, 1888; M. Ar., 1891. Director of Trade Schools and Instructor in Drawing, New York State Reformatory, Elmira, N. Y., 1888-89; Instructor in Architecture, Syracuse University, 1889-92.

HERBERT CHARLES NASH, Librarian.
23 Salvatierra St.

Vice-Consul of the United States at Nice, France, 1877-81; Private Secretary to the Hon. Leland Stanford, 1884-93; Secretary of the Board of Trustees, Leland Stanford Jr. University, since 1886.

FRANK MACE McFARLAND, Associate Professor of Histology.
467 Forest Ave.

Ph. B., De Pauw University, 1889; A. M., Leland Stanford Jr. University, 1893; Ph. D., University of Würzburg, 1896. Assistant in Biology, De Pauw University, 1888-89; Professor of Biology, Olivet College, 1889-92; Student, Würzburg, Zürich, and Naples, 1894-96.

GEORGE CLINTON PRICE, Associate Professor of Zoology.
453 Melville Ave.

B. S., De Pauw University, 1890; Ph. D., Leland Stanford Jr. University, 1897. Student in Biology, Johns Hopkins University, 1890-92, University of Münich, 1895-96.

JOHN CHARLES LOUNSBURY FISH, Associate Professor of Civil Engineering. *382 Lincoln Ave.*

C. E., Cornell University, 1892. Instructor in Civil Engineering, Cornell University, 1892-93.

ALEXIS VASILYEVICH BABINE, Associate Librarian. *Menlo Heights.*

Graduate, Elatma (Russia) Gymnasium, 1885; A. B., Cornell University, 1892; A. M., 1894. Student, St. Petersburg Institute of History and Philology, 1885-87; Teacher, Okhta Trade School, St. Petersburg, 1887-89; Cataloguer, President White Library, Cornell University, 1890-96; Librarian, Indiana University, 1896-98.

ELWOOD P. CUBBERLEY, Associate Professor of Education. *9 Salvatierra St.*

A. B., Indiana University, 1891. Professor of Physical Science, Vincennes University (Ind.), 1891-93. President, 1893-96; Superintendent of City Schools, San Diego, Cal., 1896-98.

MARY ROBERTS SMITH, Associate Professor of Sociology. *1146 Waverley St.*

Ph. B., Cornell University, 1880; M. S., 1882; Ph. D., Leland Stanford Jr. University, 1896. Teacher of History, Washington, D. C., High School, 1882-84; Teacher of History, Private School, Cincinnati, O., 1884-86; Instructor in History and Economics, Wellesley College, 1886-90, Registrar and Secretary of Board of Examiners, 1889-90.

GUIDO HUGO MARX, Associate Professor of Mechanical Engineering. *356 Lincoln Ave.*

M. E., Cornell University, 1893. With Gleason Machine Tool Co., Rochester, N. Y., 1893-94; with Bement & Miles, Philadelphia, 1894-95.

CLYDE AUGUSTUS DUNIWAY, Associate Professor of History. *159 Encina Hall.*

A. B., Cornell University, 1892; A. M., Harvard University, 1894; Ph. D., 1897. Instructor in History, Harvard University and Radcliffe College, 1896-97.

GEORGE ARCHIBALD CLARK, Secretary to the University. *14 Alvarado Row.*

B. L., University of Minnesota, 1891. Secretary, U. S. Fur Seal Commission, 1896-98.

CLARKE BUTLER WHITTIER, Associate Professor of Law. *11 Salvatierra St.*

A. B., Leland Stanford Jr. University, 1893; LL. B., Harvard University, 1896.

JAMES PARKER HALL, Associate Professor of Law. *181 Lytton Ave.*

A. B., Cornell University, 1894; LL. B., Harvard University, 1897. Lecturer in Law, University of Buffalo, 1898-1900.

CLEMENT AUSTIN COPELAND, Associate Professor of Electrical Engineering. *Lincoln Ave. and Bryant St.*

M. E., Cornell University, 1896. Secretary, Electric Rapid Transit Street Car Co., San Diego, 1888-92; Electrician, Copper Queen Mining Co., Bisbee, Ariz., 1896-97; Assistant Superintendent, Edison Electrical Co., Los Angeles, 1897-98.

ARTHUR ONCKEN LOVEJOY, Associate Professor of Philosophy.
178 Encina Hall.

A. B., University of California, 1895; A. M., Harvard University, 1897. James Walker Fellow of Harvard University, studying in University of Paris, 1898-99.

GEORGE JAMES PEIRCE, Associate Professor of Botany and Plant Physiology. *943 Bryant St.*

B. S., Harvard University, 1890; Ph. D., University of Leipzig, 1894. Assistant in Botany, Harvard University and Radcliffe College, 1890-92; Parker Fellow in Harvard University, studying in Bonn, Leipzig, and Münich, 1892-94; Assistant Professor of Botany, Indiana University, 1895-97.

HERMAN DE CLERCQ STEARNS, Associate Professor of Physics.
3 Salvatierra St.

A. B., Leland Stanford Jr. University, 1892; A. M., 1893. Student, University of Berlin, 1897-98.

OLIVER MARTIN JOHNSTON, Associate Professor of Romanic Languages. *University Ave. and Tasso St.*

A. B , Mississippi College, 1890; A. M., 1892; Ph. D., Johns Hopkins University, 1896. Principal, Preparatory Department, Mississippi College, 1890-91, Professor of English and History, 1891-93; Fellow in Johns Hopkins University, 1895-96; Lecturer in French Philology, Bryn Mawr College, 1896-97.

STEWART WOODFORD YOUNG, Assistant Professor of Chemistry.
31 Salvatierra St.

B. S., Cornell University, 1890. Assistant in Chemistry, Cornell University, 1890-91; Instructor in Chemistry, Swarthmore College, 1891-93.

KARL G. RENDTORFF, Assistant Professor of German.
542 Addison Ave.

A. M., Leland Stanford Jr. University, 1894; Ph. D., 1896. Student, University of Giessen, 1884-85, University of Kiel, 1885-91.

†EDWARD DANA DURAND, Assistant Professor of Finance and Administration. [*Washington, D. C.*]

A. B., Oberlin College, 1893; Ph. D., Cornell University, 1896. Legislative Librarian, New York State Library, 1896-97; Student, University of Berlin, 1897.

EDWIN DILLER STARBUCK, Assistant Professor of Education.
356 Kingsley Ave.

A. B., Indiana University, 1890; A. M., Harvard University, 1895; Ph. D., Clark University, 1897. Teacher of Mathematics and Latin, Spiceland (Ind.) Academy, 1890-91; Professor of Mathematics, Vincennes (Ind.) University, 1891-93; Fellow in Psychology, Clark University, 1895-97.

HAROLD HEATH, Assistant Professor of Zoology.
813 Marguerite St.

A. B., Ohio Wesleyan University, 1893; Ph. D., University of Pennsylvania, 1898. Assistant in Biology, Ohio Wesleyan University, 1891-93; Professor of Biology, University of the Pacific, 1893-94; Harrison Fellow in Zoology, University of Pennsylvania, 1896-98.

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† Absent on leave, 1900-01.

JOHN FLESHER NEWSOM, Assistant Professor of Mining and Metallurgy. *27 Salvatierra St.*

A. B., Indiana University, 1891; A. M., Leland Stanford Jr. University, 1893. Assistant, Arkansas Geological Survey, 1891-95; Instructor in Geology, Indiana University, 1894-96, Assistant Professor, 1896-98.

HERBERT ZABRISKIE KIP, Assistant Professor of German. *16 Alvarado Row.*

A. B., Princeton University, 1894; A. M., 1897; Ph. D., University of Leipzig, 1899. Instructor in German and Greek, Allegheny Institute, Roanoke, Va., 1895; Student, Universities of Berlin and Göttingen, 1896-97.

BURT ESTES HOWARD, Assistant Professor of Political Science. *363 Melville Ave.*

A. B., Western Reserve University, 1883; A. M., 1886; Graduate, Lane Theological Seminary, 1886; Pastor, First Presbyterian Church, Bay City, Mich., 1886-90; Pastor, First Presbyterian Church, Cleveland, O., 1890-92; Pastor, Los Angeles, Cal., 1892-99; Student, Harvard University, 1899-1900.

SAMUEL JACKSON BARNETT, Assistant Professor of Physics. *107 Encina Hall.*

A. B., University of Denver, 1894; Ph. D., Cornell University, 1898. Instructor in Physics and Biology, University of Denver, 1894-95; Assistant in Astronomical Observatory, University of Virginia, 1895-96, and Instructor in Astronomy, 1896; University Scholar and Fellow in Physics, Cornell University, 1896-98; Instructor and afterward Professor of Physics, Colorado College, 1898-1900.

†IRENE HARDY, Assistant Professor of English. [*Alta, Cal.*]

A. B., Antioch College, 1885. Teacher of English and Latin, Preparatory School, Antioch College, 1874-76; Head of English Department and Teacher of Entomology, Oakland (Cal.) High School, 1877-83, Teacher of English, 1887-92.

JACKSON ELI REYNOLDS, Assistant Professor of Law. *Mayfield.*

A. B., Leland Stanford Jr. University, 1896; LL. B., Columbia University, 1899.

CHARLES ROSS LEWERS, Assistant Professor of Law. *18 Salvatierra St.*

A. B., University of Nevada, 1893; A. B., Leland Stanford Jr. University, 1896. Student, Harvard Law School, 1896-99.

RAY LYMAN WILBUR, Assistant Professor of Physiology. *10 Alvarado Row.*

A. B., Leland Stanford Jr. University, 1896; A. M., 1897; M. D., Cooper Medical College, 1899. Instructor and Demonstrator in Physiology, Cooper Medical College, 1899-1900.

PIERRE JOSEPH FREIN, Assistant Professor of Romanic Languages. *823 Marguerite St.*

A. B., Williams College, 1892; Ph. D., Johns Hopkins University, 1899. Instructor in French and Greek, Oahu College, 1893-95; Fellow in Johns Hopkins University, 1898-99.

† Absent on leave, 1900-1901.

FREDERICK JOHN ROGERS, Assistant Professor of Physics.
533 Middlefield Road.

M. S., Cornell University, 1891. Instructor in Physics, Cornell University, 1892-1900.

†LILLIE JANE MARTIN, Assistant Professor of Psychology.
[*Worcester, Mass.*]

A. B., Vassar College, 1880. Teacher of Science, Indianapolis High School, 1880-89; Vice-Principal and Head of Department of Science, Girls' High School, San Francisco, 1889-94; Student, University of Göttingen, 1894-98.

HANS FREDERICK BLICHFELDT, Assistant Professor of Mathematics. *College Terrace.*

A. B., Leland Stanford Jr. University, 1896; Ph. D., University of Leipzig, 1898.

*MARATHON MONTROSE RAMSAY, Assistant Professor of Spanish. [*Baltimore, Md.*]

B. S., Columbian University, 1894; A. M., 1895. Instructor in Spanish, Columbian University, 1894-96, Professor of Romanic Languages, 1896-1900; Fellow by Courtesy, Johns Hopkins University, 1900-01.

*EDWARD PLAYFAIR ANDERSON, Assistant Professor of English Philology. [*San Jose.*]

A. M., University of Michigan, 1879; Ph. D., 1886. Professor of English Literature and History, Ohio University, 1888-89; Professor of English and Modern Languages, Michigan Agricultural College, 1889-90; Professor of French and German, Miami University, 1891-96; Teacher in the Washburn School, San Jose, 1897-1901.

*CHARLES HENRY RIEBER, Assistant Professor of Logic.

A. B., University of California, 1888; A. M., Harvard University, 1899. Assistant in Philosophy, Harvard University, 1899-1901.

JAMES HARRIS CURRAN, Acting Assistant Professor of Economics.
Encina Hall.

A. B., Dickinson College, 1892; LL. B., Dickinson School of Law, 1896; Ph. D., University of Halle, 1900. Instructor in Tome Institute, 1896-98, 1900-01.

GAILLARD THOMAS LAPSLEY, Acting Assistant Professor of History. *106 Encina Hall.*

A. B., Harvard University, 1893; A. M., 1894; Ph. D., 1897. Assistant in History, Harvard University, 1895-96; Student, in the Public Record Office, London, 1897-98; Instructor in History, Harvard University, 1899-1901.

ELMER ELSWORTH FARMER, Instructor in Electrical Engineering. *228 Bryant St.*

A. B., Leland Stanford Jr. University, 1895; E. E., 1897.

ALFRED FRANCIS WILLIAM SCHMIDT, Assistant Librarian.
32 Alvarado Row.

A. B., Leland Stanford Jr. University, 1895.

† Absent on leave, 1900-01.
* Beginning September, 1901.

CLARA S. STOLTENBERG, Instructor in Physiology.
14 Alvarado Row.

A. B., Leland Stanford Jr. University, 1896; A. M., 1897.

ZOË WORTHINGTON FISKE, Instructor in Drawing and Painting.
364 Kingsley Ave.

B. P., Syracuse University, 1891. Student and Member Art Students' League, New York, 1892-94; Student, Académie Montparnasse, Paris, 1895-96.

EDWARD LAMBE PARSONS, Instructor in Philosophy.
San Mateo.

A. B., Yale University, 1889. Student, Union Theological Seminary, New York, 1889-92, Fellow, 1892-94; Student, University of Berlin, 1892-94; Instructor, New York Training School for Deaconesses, 1894-95; Rector of Trinity Church, Menlo Park, 1896-1900; Rector of St. Matthew's Church, San Mateo, since 1900.

ELEANOR BROOKS PEARSON, Instructor in English.
364 Kingsley Ave.

A. B., University of Michigan, 1891. Principal, Castilleja Hall, 1891-98.

JOHN O. SNYDER, Instructor in Zoology.
Lytton Ave. and Cowper St.

A. B., Leland Stanford Jr. University, 1897; A. M., 1899.

THOMAS ANDREW STOREY, Instructor in Hygiene and Organic Training. *10 Alvarado Row.*

A. B., Leland Stanford Jr. University, 1896; A. M., 1900.

MAUD MARCH, Instructor in Hygiene and Organic Training.
Madroño Hall.

JEFFERSON ELMORE, Instructor in Latin.
827 Middlefield Road.

A. B., Leland Stanford Jr. University, 1895; A. M., 1895; Ph. D., 1901. Principal of Merced County High School, 1895-1897.

†ROBERT ECKLES SWAIN, Instructor in Chemistry.
[*In Europe.*]

A. B., Leland Stanford Jr. University, 1899.

LUCILE EAVES, Instructor in History.
5 Salvatierra St.

A. B., Leland Stanford Jr. University, 1894.

BLANCHE JOSEPHINE ANDERSON, Instructor in History.
327 Lytton Ave.

A. B., Oberlin College, 1890; A. M., Leland Stanford Jr. University, 1898.

WILLIAM FREEMAN SNOW, Instructor in Hygiene and Organic Training. *Embarcadero Road.*

A. B., Leland Stanford Jr. University, 1896; A. M., 1897; M. D., Cooper Medical College, 1900.

† Absent on leave, 1900-01.

FRANK GEORGE BAUM, Instructor in Electrical Engineering.
337 Hamilton Ave.

A. B., Leland Stanford Jr. University, 1898; E. E., 1899.

EDWIN CHAPIN STARKS, Curator in Zoology.
1020 Waverley St.

Assistant in United States Bureau of Biological Survey, 1897-99; Curator of the Museum, University of Washington, 1899-1900.

GEORGE FREDERICK MADDOCK, Instructor in Electrical Engineering. *College Terrace.*

A. B., Leland Stanford Jr. University, 1900.

HAROLD STRUAN MUCKLESTON, Instructor in Greek.
431 University Ave.

A. B., Trinity University, Toronto, 1899; A. M., Leland Stanford Jr. University, 1900.

FREDERIC HUNTINGTON BARTLETT, Instructor in English.
431 University Ave.

A. B., Harvard University, 1895; A. M., Columbia University, 1898. Teacher in English, Pomfret School (Conn.), 1895-96; Teacher in English, Belmont School, 1899-1900.

SAMUEL SWAYZE SEWARD, Jr., Instructor in English.
431 University Ave.

A. B., Columbia College, 1896; A. M., Columbia University, 1897. Scholar in Literature, Columbia University, 1896-97, Assistant in Literature, 1897-99; Student, Oxford University, 1899-1900.

ERNEST WILLIAM RETTGER, Instructor in Mathematics.
109 Encina Hall.

A. B., Indiana University, 1893; Ph. D., Clark University, 1898. Principal, High School, Rensselaer, Ind., 1894-95; Fellow, Clark University, 1895-98; Instructor, in Mathematics, Indiana University, 1898-1900.

†LEE EMERSON BASSETT, Instructor in Elocution.
[*Worcester, Mass.*]

A. B., Leland Stanford Jr. University, 1901.

JOSEPH PARKER WARREN, Instructor in History.
182 Encina Hall.

A. B., Harvard University, 1896; A. M., 1897. Fellow in American History, University of Pennsylvania, 1897-98; Assistant in History, Harvard University, 1896-97, Assistant in Government, 1899-1901; President of the Old South Historical Society, 1896-1900.

WILLIAM JONATHAN NEIDIG, Instructor in English.
50 Encina Hall.

A. B., Leland Stanford Jr. University, 1896.

†DAVID SAMUEL SNEDDEN, Instructor in Education.
[*New York City.*]

A. B., St. Vincent's College, Los Angeles, 1890; A. B., Leland Stanford Jr. University, 1897. Principal of Schools, Santa Paula, Cal., 1892-93; Principal of High School, Paso Robles, Cal., 1897-1900; Student, Columbia University, 1900-01.

† Beginning September, 1901.

ROBERT EVANS SNODGRASS, Instructor in Entomology.
261 Waverley St.

A. B., Leland Stanford Jr. University, 1901.

JOHN EZRA McDOWELL, Assistant Registrar.
10 Lasuen Ave.

A. B., Leland Stanford Jr. University, 1900.

SUSAN BROWN BRISTOL, President's Stenographer.
19 Salvatierra St.

A. B., Leland Stanford Jr. University, 1897.

JULIUS EMBRET PETERSON, Foreman of the Forge.
660 Homer Ave.

EUGENE SOULE, Foreman of the Woodworking Shop.
633 Lytton Ave.

ERNEST HARVEY SHIBLEY, Assistant in Mathematics.
445 Homer Ave.

A. B., Leland Stanford Jr. University, 1900.

WILLIAM ALBERT MANNING, Assistant in Mathematics.
109 Encina Hall.

A. B., Willamette University, 1900.

CHARLES FREDERICK SCHMUTZLER, Assistant in German.
219 Ramona St.

A. B., Leland Stanford Jr. University, 1898; A. M., 1899.

PETER von LE FORT, Assistant in French.
661 Waverley St.

Graduate, Gymnasium of Anklam, 1879. Student, University of Lausanne, 1887-88; Teacher of Modern Languages, Belmont School, 1891-93, St. Matthew's Military Academy, 1896-99, Hoitt's School, 1895-1900.

CHARLES REIGHLEY DETRICK, Assistant in Economics.
Running Farm Cottage.

A. B., Harvard University, 1891.

HOMER PRICE EARLE, Assistant in Spanish.
847 Bryant St.

SHINKAI INOKICHI KUWANA, Assistant in Entomology.
College Terrace.

A. B., Leland Stanford Jr. University, 1899.

MILNOR ROBERTS, Assistant in Blowpipe Analysis.
23 Salvatierra St.

A. B., Leland Stanford Jr. University, 1899.

RALPH ARNOLD, Assistant in Geology.
417 Tasso St.

A. B., Leland Stanford Jr. University, 1899; A. M., 1900.

JOHN T. McMANIS, Assistant in Education.
835 Waverley St.

A. B., Leland Stanford Jr. University, 1897.

LE ROY ABRAMS, Assistant in Systematic Botany.
126 Encina Hall.

A. B., Leland Stanford Jr. University, 1899.

LLOYD ELLIOTT HARTER, Assistant in Ethics.
89 Encina Hall.

RUBY GREEN BELL, Assistant in Bionomics.
9 Lasuen Ave.

ALVIN JOSEPH COX, Assistant in Chemistry.
620 High St.

FRANCIS JAMES REIDY, Assistant in Chemistry.
3682 San Fernando St., San Jose.

FRANK L. HESS, Assistant in Assaying.
85 Encina Hall.

RICHMOND WHEELER, Lecture Assistant in Chemistry.
329 University Ave.

JESSIE ARCHIBALD MOORE, Assistant in Chemistry.
24 Roble Hall.

A. B., Leland Stanford Jr. University, 1901.

ELIOT GRAY POTTER, Assistant in Chemistry.
707 Bryant St.

ANTON JULIUS CARLSON, Assistant in Physiology.
627 Waverley St.

A. B., Augustana College, 1898; A. M., 1899.

ALVIN WALTER BAIRD, Assistant in Physiology.
55 Encina Hall.

WILLIAM HENRY SLOAN, Assistant in Physiology.
627 Waverley St.

JOSEPH GRANT BROWN, Assistant in Physics.
412 Kipling St.

†FRANK ERNEST THOMPSON, Assistant in Education.
731 Emerson St.

MICHITARO SHINDO, Assistant Curator, Hopkins Laboratory.
Encina Hall.

HALBERT WILLIAM CHAPPELL, Assistant in the Gymnasium.
835 Waverley St.

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† Beginning September, 1901.

VERA TOWNSEND, Assistant in the Gymnasium.
414 Bryant St.

CHARLES ABRAHAM CANTWELL, Assistant in the Gymnasium.
120 Encina Hall.

WALTER MORTEN BOSTON, Assistant in the Gymnasium.
80 Encina Hall.

A. B., Leland Stanford Jr. University, 1900.

FLORENCE BOLTON, Assistant in the Gymnasium.
Madroño Hall.

KATHRYN ROMER KIP, Assistant in the Gymnasium.
24 Alvarado Row.

CHLOE LESLEY STARKS, Artist of the Hopkins Laboratory.
1020 Waverley St.

LYDIA M. HART, Assistant Artist of the Hopkins Laboratory.
Palo Alto.

FLORENCE HUGHES, Cataloguer.
835 Waverley St.

LOUISE MAXWELL, Assistant in Classification.
22 Salvatierra St.

ALPHA BUSHNELL, Library Assistant.
Madroño Hall.

WESLEY HEMAN BEACH, Library Assistant.
129 Encina Hall.

A. B., Leland Stanford Jr. University, 1900.

HARROLD TRADER, Library Assistant.
446 Hamilton Ave.

MARTHA ELIZABETH HAVEN, Library Assistant.
329 Lincoln Ave.

A. B., Leland Stanford Jr. University, 1896.

JESSE MARION BEACH, Library Assistant.
207 University Ave.

MARY ANNE HADDEN, Library Assistant.
557 Hamilton Ave.

ISAAC RUSSELL, Library Assistant.
129 Encina Hall.

HARRY C. PETERSON, Curator of the Leland Stanford Junior Museum.
660 Homer Ave.

HARRIET HENRIETTA BROWN, Assistant to the Registrar.
24 Alvarado Row.

KARL ASA RICHARDSON, Assistant to the Secretary.
Xazmin House.

ROGER JOHN STERRETT, Assistant to the Secretary.
132 Encina Hall.

LILLIAN EMELINE RAY, Mistress of Roble Hall.
Roble Hall.

A. B., Leland Stanford Jr. University, 1897.

FRANCES ELIZABETH SHORT, Mistress of Madroño Hall.
Madroño Hall.

LECTURERS

CHARLES REYNOLDS BROWN, Lecturer on The Ethics of Christ.
322 Twenty-second St., Oakland.

A. B., University of Iowa, 1883; A. M., 1886; S. T. B., Boston University School of Theology, 1889. Pastor, Wesley Chapel, Cincinnati, 1889-92; Pastor, Winthrop Church, Boston, 1892-96; Student, Harvard University, 1893-94; Pastor, First Congregational Church, Oakland, since 1896.

JOSEPH HUTCHINSON, Lecturer in Law.
403 Kingsley Ave.

A. B., University of California, 1878; LL. B., Hastings Law School, 1882.

CURTIS H. LINDLEY, Lecturer on Mining and Irrigation Law.
San Francisco.

OTHER OFFICERS

CHARLES EDWARD HODGES, Resident Architect.
Pine Cottage.

CARLE A. PHILBROOK, Clerk to the Architect.
141 Encina Hall.

M. J. LOVETT, Chief Engineer.
Mayfield.

JOHN J. LEWIN, Electrician.
927 Ramona St.

GEORGE ADDERSON, Overseer of Buildings.
Encina Hall.

CHARLES F. MOORE, University Plumber.
Menlo Park.

CHARLES C. WALLEY, University Carpenter.
Mayfield.

STANDING COMMITTEES

The Registrar is ex-officio *Chairman of the Committees on Admission and Advanced Standing, Registration, and Graduation.*

Ways and Means: Branner, Stillman, Gilbert, C. D. Marx, Flügel.

The Vice-President is Chairman of the Committee on Ways and Means and Acting President during the absence of the President.

Student Affairs: Green, Gilbert, Richardson, Branner, Griffin.

Admission and Advanced Standing: Elliott, Matzke, Miller, Cubberley, Hoskins.

Scholarship: Gilbert, Richardson, Murray, Whittier, Elliott.

Registration: Elliott, Lenox, Cubberley, Matzke, Price.

Graduation: Elliott, Lathrop, Hoskins, Stillman, Duniway.

Graduate Study: Flugel, Branner, Sanford, Fairclough, Lovejoy, Gilbert, Dudley, Murray.

Chapel Services: Elliott, Murray, Miller, Lovejoy, M. R. Smith.

Library: Stillman, C. D. Marx, Gilbert, Cubberley, Pease, Nash, Babine.

University Publications: Pease, Nash, Duniway, Campbell, Elliott.

Literary Contests: Lathrop, Duniway, Campbell, Abbott, Hall.

Teachers' Bureau: Cubberley, Elliott, G. A. Clark, Goebel, Anderson.

University Extension: Duniway, Anderson, Cubberley, Miller.

Public Exercises, Lectures, and Social Affairs: Newcomer, Stillman, Nash, G. A. Clark, Campbell.

Students' Aid: M. R. Smith, Griffin, Peirce, Price, Snow.

Athletics: Richardson, Branner, Kellogg, Angell, G. H. Marx.

Legislation: Abbott, Whittier, Sanford, Hall, Angell.

Hopkins Laboratory: Price, Gilbert, Jenkins, McFarland, Kellogg.

Organization

Foundation

The founding, at Palo Alto, of a "university for both sexes, with the colleges, schools, seminaries of learning, mechanical institutes, museums, galleries of art, and all other things necessary and appropriate to a university of high degree," was determined upon by the Hon. Leland Stanford and Jane Lathrop Stanford, in 1884. In March of the year following the Legislature of California passed an Act providing for the administration of trust funds in connection with institutions of learning. November 14, 1885, the Grant of Endowment was publicly made in accordance with this Act, and on the same day the Board of Trustees held its first meeting, in San Francisco. The work of construction was at once begun, and the corner stone laid May 14, 1887, the nineteenth anniversary of the birth of Leland Stanford, Jr. The University was formally opened to students October 1, 1891.

Name and Purpose

The idea of the University, in the words of its founders, "came directly and largely from our son and only child, Leland; and in the belief that had he been spared to advise as to the disposition of our estate, he would have desired the devotion of a large portion thereof to this purpose, we will that for all time to come the institution hereby founded shall bear his name, and shall be known as The Leland Stanford Junior University."

The object of the University, as stated in its Charter, is "to qualify students for personal success and direct usefulness in life," and its purposes, "to promote the public welfare by exercising an influence in behalf of humanity and civilization, teaching the blessings of liberty regulated by law, and inculcating love and reverence for the great principles of government as derived from the inalienable rights of man to life, liberty, and the pursuit of happiness."

Location

The University is located on the Palo Alto estate in the Santa Clara Valley, thirty-three miles southeast of San Francisco, on the Coast Division of the Southern Pacific Railway. The estate

consists of about nine thousand acres, partly level and partly rising into the foothills of the Santa Cruz Range. On the grounds are the residence of the founders and an extensive arboretum containing a great variety of shrubs and trees. The Bay of San Francisco lies about three miles east of the University buildings, and across the bay the Monte Diablo Range rises to the height of over four thousand feet. The Lick Observatory, crowning Mount Hamilton, the highest of the range, is plainly visible. To the southwest, between the valley and the ocean, is the heavily wooded Santa Cruz Range, two thousand to four thousand feet in height.

The Santa Clara Valley is one of the most attractive portions of the State in climate, in natural beauty, and in the fertility and adaptiveness of its soil to all the varied fruits of California. The characteristics of the climate are its evenness of temperature, its pure and bracing air, and its freedom alike from the fogs and harsh winds of the coast and from the oppressive summer heat of the interior valleys. In winter the mercury rarely falls below 30 degrees, and the average midday temperature is about 55 degrees; in summer the average midday temperature is between 75 and 80 degrees, while the nights are always cool. The rainfall of about fifteen inches is chiefly confined to the months from December to April, inclusive.

Endowment

The landed endowment of the University, in addition to the Palo Alto estate, consists of the Vina estate, in Tehama County, of fifty-nine thousand acres, the Gridley estate, in Butte County, of twenty-two thousand acres, and various tracts of minor importance. The Stanford residence in San Francisco has also been deeded to the University by Mrs. Stanford. The main part of the University endowment, included in recent gifts of Mrs. Stanford, consists of interest bearing securities.

Buildings

In arranging buildings and grounds the plan has been to conform them to the climatic conditions of California, and to provide for indefinite expansion, without crowding or distortion. The original plan contemplated a series of quadrangles, to be erected as the needs of the University might demand, and intended to furnish facilities for all general University work. Surrounding these were to be various detached buildings for miscellaneous purposes.

The central group of buildings is to constitute two quadrangles, one entirely surrounding the other. The INNER QUADRANGLE, with the exception of the Memorial Church, was completed in 1891; the Memorial Church, begun in 1899, will be completed in 1901. The twelve one-story buildings and Memorial Church are connected by a continuous open arcade, facing a paved court five hundred and eighty-six feet long, by two hundred and forty-six feet wide, or three and a quarter acres. The buildings are of buff sandstone, somewhat varied in color. The stonework is of broken ashlar, with rough rock face, and the roofs are covered with red tile. The architectural *motif* is to be found in the old Spanish Missions of California.

The OUTER QUADRANGLE was begun in July, 1898, the Assembly Hall, Library, and Memorial Arch being completed in 1899. Six additional buildings, now in process of construction, will be completed in 1902; these will afford accommodations for the Departments of Physiology, Zoology, Botany, Geology and Mining, English, History, Economics, Psychology, and Physics. The main buildings of the outer quadrangle are two stories in height above the basement, and constructed of the same material and in the same general style as the inner quadrangle. The façade will consist of the memorial arch in the center with a group of three buildings on either side, the whole connected by a continuous open arcade eight hundred and ninety-four feet in length.

The MEMORIAL ARCH, forming the central feature of the main façade of the University, is one hundred feet in height, ninety feet wide, and thirty-four feet in depth. The archway is forty-four feet wide and fifty-one feet high. A sculptured frieze twelve feet in height, designed by St. Gaudens, and representing the "Progress of Civilization in America," is to surround the arch. Above this frieze is a corbelled arch course terminating in the parapet wall four feet above the flat fireproof roof. A circular iron stairway leads from the ground level to the roof.

The ASSEMBLY HALL is the first building east of the Memorial Arch. It has a frontage of one hundred and eight feet, with an arcade fourteen feet wide and extended on the west side to connect with the inner quadrangle. The Assembly Hall, including galleries, has a seating capacity of seventeen hundred. The stage is 36x28 feet, with two dressing rooms on each side. The stage and auditorium are lighted by two large ornamental dome skylights.

The LELAND STANFORD JUNIOR MUSEUM, a concrete building, 540x156 feet, including wings, is situated a quarter of a mile from the quadrangles, and on the west side of the Palo Alto Avenue. The Museum contains the archæological and art collections of the University.

The CHEMISTRY building was begun in 1900 and will be completed in 1901. It is located between the quadrangles and the Museum. It is of stone, like the quadrangle buildings, and consists of two separate structures—the main Chemistry building and the Assaying Laboratory. The main building is 235 feet in length and 100 feet in width at the wings, and consists of two stories with basement and attic. The Assaying Laboratory is a one-story building, 115x30 feet, in the rear of the main building, and separated from it by an enclosed court.

Behind the central quadrangles are placed the workshops of the engineering departments, power-houses, etc., and the rooms of the Department of Drawing and Painting.

The dormitories are east and west of the quadrangle. ENCINA HALL, for young men, is at the east and occupies a ground area of 312x150 feet. It is four stories high, built of the same material as the quadrangle, and decorated with end arcades, a central arched porch, and mosaic work. It is provided with electric lights, hot and cold water, steam heat, suitable furniture, bath-rooms on each floor, and has accommodations for three hundred students. ROBLE HALL, for young women, is at the west. It is of concrete, is about a third the size of Encina Hall, and will accommodate one hundred students. MADROÑO HALL is a frame building, at present used as an annex to Roble Hall. It will accommodate about thirty students.

ENCINA GYMNASIUM and ROBLE GYMNASIUM are substantial frame buildings, equipped with the necessary apparatus and appliances for physical training.

The UNIVERSITY INN is a frame building, just east of the quadrangle, erected in 1898. It is intended primarily as a University commons for students living on the campus, and is leased and managed by Mr. Frederick Phelps, of College Park.

The grounds immediately about the University have been reserved, in part for experimental purposes, and in part as residence sites for members of the Faculty and others who may desire to live on the University campus. Over forty cottages have already been erected.

Scientific Collections

It is intended to bring together in the museums of the University a full representation of the natural history and mineral products of California, collections of all books, pamphlets, photographs, and maps bearing upon the early history of the West, and full collections of Indian antiquities and illustrations of aboriginal life. It is desired to receive donations from all persons who are interested in the work and who have material of value to the museums. Collections sent in this way will be carefully labeled and preserved, and the name of the donor will be kept on record. Messrs. Wells, Fargo & Co. generously offer to transport such gifts to the University free of charge, and have instructed their officials to "receive and promptly forward such offerings as may be tendered from time to time."

Trustees

The general management and control of the institution is vested in a board of trustees, originally numbering twenty-four, and chosen for life. By a modification of the charter, effected by the surviving founder in 1897, no vacancies will be filled until the number is reduced to fifteen, and future appointments will be for a term of ten years. The charter provides that the founders, during their lives, shall "perform all the duties and exercise all the powers and privileges enjoined upon and vested in the trustees."

Faculty and Council

The Faculty consists of the president, professors, associate professors, assistant professors, and instructors, aided by nonresident lecturers, assistants, and other officers. Its routine work is divided among various committees, responsible primarily to the president.

The University Council consists of the president, professors, and associate professors. To the Council are entrusted the determination of requirements for admission, and for the various degrees, and the recommendation of candidates for graduation. It also acts as an advisory body on any questions of general policy that may be submitted to it by the president or trustees.

Conduct of Students

In the government of the University the largest liberty consistent with good work and good order is allowed. Students are expected to show both within and without the University such

respect for order, morality, personal honor, and the rights of others as is demanded of good citizens. Failure to do this will be sufficient cause for removal from the University.

The primary purpose of the University, as set forth by its founders, is to train young men and young women "for personal success and direct usefulness in life." "Success" and "usefulness," as here understood, involve character and effectiveness; and the resources of the University are directed toward the development of these qualities, so that every graduate may be prepared to do some useful thing honestly and effectively. Each student, therefore, is expected and encouraged to work toward some definite end in the choice of his studies. Students unable or unwilling to do serious work, looking toward a definite end, are not welcomed and will not be retained in the University.

Student Organizations

The Young Men's Christian Association and the Young Women's Christian Association hold regular mid-week and Sunday evening meetings, and compile each year a *Hand-Book* containing special information relating to the details of University life at Palo Alto. This hand-book will be mailed to prospective students on application to the Registrar.

In addition to the Christian Associations, numerous general student organizations have been formed for mutual assistance and improvement in various lines. Two college journals, the *Daily Palo Alto* and bi-weekly *Sequoia*, are published by the Associated Students. The *Chaparral* is a bi-weekly published under the auspices of the Press Association. The *Quad* is an annual, published by the Junior Class.

Departments

The work of the University is grouped under the following departmental heads: Greek; Latin; Germanic Languages; Romanic Languages; English Language and Literature; Philosophy; Psychology; Education; History; Economics and Social Science; Law; Drawing and Painting; Mathematics; Physics; Chemistry; Botany; Physiology; Hygiene and Organic Training; Zoology; Geology and Mining, Civil Engineering; Mechanical Engineering; Electrical Engineering.

The Hopkins Laboratory of Natural History, located at Pacific Grove, on the Bay of Monterey, is a branch of the biological work of the University.

Admission

I. TO UNDERGRADUATE STANDING

Candidates must be at least *sixteen* years of age. They must present certificates of good moral character, and if from other colleges or universities, must bring letters of honorable dismissal.

Admission in full undergraduate standing implies the completion of a four years' high school course, or its equivalent. Undergraduate standing may be obtained (*a*) on examination at the University, or (*b*) wholly or in part without examination (see pp. 46-49). The subjects which may be offered, with the credit value of each, are enumerated below.

Fifteen credits are required for full undergraduate standing. These may be made up of English Composition (two credits) and such other subjects (aggregating thirteen credits) as may be selected by the candidate, except that subject 23 may not be offered if either subject 10 or subject 11 is credited. *Twelve* credits will be accepted for admission in partial standing; but all entrance deficiencies must be satisfied before graduation.

Entrance Subjects

1. English Composition (2).
2. Elementary Algebra (1½)
3. Plane Geometry (1).
4. Solid Geometry (½).
5. Trigonometry (½).
6. Adv. Algebra (½, 1, 1½).
7. Physics (1).
8. Chemistry (1).
9. Physiology (1).
10. Botany (1).
11. Zoology (1).
12. Freehand Drawing (1.)
13. Ancient History (1).
14. Mediæval and Modern History (1).
15. English History (1).
16. American History (1).
17. English Literature (1, 2)
18. Spanish (1).
19. French (2, 3).
20. German (2, 3, 4).
21. Latin, (2, 3, 4).
22. Greek (2, 3).
23. Biology (1).
24. Physiography (1).
25. Mechanical Drawing (½).
26. Woodworking (½).
27. Forge Work (½).
28. Foundry Work (½).
29. Machine Shop Work(1).

The following will indicate the preparation necessary in the various subjects. Each credit is intended to represent one full year's work in the high school, with daily recitations, two laboratory periods being regarded as the equivalent of one recitation period.

1. English Composition

The ability to write exercises not only free from marked deficiences in spelling, punctuation, sentence structure, and paragraphing, but also proving the candidate's ability to think consecutively on a simple subject. Such subjects, as set at the time of the examination, will be drawn for the most part from the candidate's own experiences. In place of the examination, exercise books, certified by the teacher, may be presented. These books must contain at least six compositions of about 250 words each, written in class and not corrected by the teacher, not more than two of them to be on subjects drawn from the pupil's reading. Blanks to be filled out by the teacher and sent in with the exercise-books may be obtained from the Registrar. To be acted on in September, the books must be in the hands of the Registrar by August 15; to be acted on in January, by December 15.

The work in English composition should be given at least two recitations a week throughout the entire high school course. The greater part of this time should be devoted to practice in writing, but it is recommended that some attention be also paid to instruction in the fundamental principles of formal rhetoric. (*2 credits.*)

2. Elementary Algebra

The requirement in this subject may be roughly defined as algebra through quadratic equations. Emphasis should be placed upon the laws of brackets, the subjects of multiplication, factoring, common divisors and multiples, binomial theorem for integral exponents, and the laws of exponents and of fractions. Under equations are included those of the first degree in two or more unknowns, and simple and quadratic equations in one unknown ; also the formation of equations with given roots, and the statement of problems in equational form.

Facility and accuracy in the manipulation of algebraic expressions should be attained, as well as an understanding of the meaning of the various operations. The solution of a large number of moderately difficult problems is preferable to the solution of

a smaller number of more difficult ones; while the frequent use of problems involving lateral expressions serves to impress upon the pupil the generality of algebraic results. (1½ *credits.*)

3. Plane Geometry

In the teaching of geometry stress should be placed upon accuracy of statement as well as upon strict reasoning. This end may be promoted by requiring original propositions to be written out in full in a neat and exact manner. Emphasis should be placed upon clear thinking rather than upon the acquirement of geometrical knowledge.

The requirement in plane geometry includes problems in mensuration of plane figures and original propositions, as well as the usual demonstrated theorems. The following topics are included: the general properties of plane figures; the circle, and the measure of angles; areas; regular polygons, and the measure of the circle. (*1 credit.*)

4. Solid Geometry

The topics included are: relations of lines and planes to space; the properties of prisms, pyramids, cylinders, and cones; the sphere and spherical triangle; also the mensuration of solids, and original propositions. (½ *credit.*)

5. Trigonometry

This subject includes the general formulas of plane trigonometry; the theory of logarithms and the use of logarithmic tables; applications to the numerical solution of triangles and of simple problems in heights and distances. (½ *credit.*)

6. Advanced Algebra

The requirements in this subject are arranged in three parts, the topics of the first part (*a*) being usually included in high school courses in advanced algebra. The requirements indicated in the second and third parts (*b* and *c*) represent a more modern treatment of the subject, and are recommended in place of the topics usually treated in the more advanced courses in algebra.

a

Simultaneous quadratic equations, and equations solved like quadratics; theory of quadratic equations; fractional and irrational equations; surds and complex quantities; arithmetical, geometrical, and harmonic progressions; permutations and combinations. (½ *credit.*)

b

Theory of degree, homogeneity, and symmetry; type terms and sigma notation; transformation of quotients; conditions of divisibility; the remainder theorem; undetermined coefficients; detached coefficients, and synthetic division; together with applications of the foregoing principles to the multiplication, factorization, and transformation of algebraic functions. (*½ credit.*)

c

Decomposition of fractions into partial fractions; theory of complex numbers; De Moivre's Formula, and the roots of numbers; elementary theory of equations; the numerical solution of equations of higher degrees. (*½ credit.*)

7. Physics

The equivalent of one year's work in the high school, including both laboratory and text-book work. It is preferred that at least one-half the time be given to laboratory work in which the students perform individually such experiments as are described in the better class of laboratory manuals, of which Hall & Bergen's Physics may be named as an example. Accurate notes of the laboratory work should be kept. The text-book study should cover the ground of such a text as Crew's Physics, Gage's Elements, or Carhart & Chute's Physics. These books are not recommended as superior to others, but are mentioned as including about the amount of work on which the candidates should be prepared. (*1 credit.*)

8. Chemistry

Beside the usual text-book and recitation work, each student should have a course in the laboratory, where he performs the experiments for himself. Accurate notes of the laboratory work should be kept. The amount of laboratory work desired cannot be obtained with less than four hours per week for one school year spent in actual laboratory work. It is preferred that the laboratory work be entirely upon *general* rather than partly upon *analytical* chemistry. The course required is comprised in Richardson's Laboratory Manual and Principles of Chemistry, or in Remsen's Introduction to the Study of Chemistry, and is the equivalent of Chemistry courses *1* and *a* in the University. The inorganic portion of Roscoe's Elementary Chemistry, or of Elliot & Storer's Elementary Chemistry, with a proper course of

laboratory experiments such as is given in Smith & Keller's Laboratory Manual, are also recommended as covering the course required. (*1 credit.*)

Students who receive entrance credit on recommendation, and who wish to continue the study of chemistry in the University will be admitted to advance courses only upon passing a satisfactory examination upon the work covered by the elementary course. Failing this, they will be expected to take the elementary course, for which University credit will be given.

9. Physiology

The elements of human physiology and hygiene, the equivalent of Martin's Human Body. The text-book work should be accompanied by experiment, dissection of animals and organs, and a certain amount of study of the tissues with the microscope.

Candidates who have taken only the work in elementary physiology and hygiene done in the grammar or intermediate grades are not prepared to offer the subject for entrance credit. The elementary physiology and hygiene of the grammar grades, in this regard, is in the same category as are the other subjects studied in the grammar grades, such as arithmetic and geography, which are assumed as preliminary to the subjects offered for entrance. (*1 credit.*)

10. Botany

A knowledge of plants and plant-structure and development obtainable from experimental work in connection with Bessey's or Campbell's Botany, or some similar work. At least two-thirds of the year's work should be devoted to the laboratory.

In preparing to meet the requirements in botany, the main thing to be had in mind is that the work shall be of a practical nature: that is, that the study be done mainly from specimens and not from books. It must be borne in mind that botany is a department of biology, and means something more than the mere collecting and naming of specimens. A study of the growth and development of the forms studied is of the highest importance, and so far as possible should be made a prominent feature in the work. A good plan for most schools is to select a few typical representatives of the principal groups of plants, e. g., examples of the green, red, and brown algæ, moulds, mildews, lichens, liverworts, mosses, ferns, etc., as well as representatives of the great divisions of the flowering plants. Examples of all these

are everywhere accessible, and a knowledge of the main characteristics of each of the principal divisions of plants will be expected of the student. The forms selected are to be studied as exhaustively as circumstances will admit, and students should be expected to keep a careful record of their work in the form of notes and drawings made directly from the specimens as they are studied.

If possible the student should be allowed the use of a compound microscope, but when this is not practicable, microscopic demonstrations by the instructor are indispensable. The laboratory work of the students may be supplemented by such explanatory and text-book work as may be deemed necessary, but this must be understood to supplement and not to replace the laboratory work.

Notes and drawings should be neatly made in blank-books of moderate size. The paper for the drawings should be white, unruled, hard, smooth but not glazed. A hard pencil should be used in drawings, and accuracy and neatness are both to be emphasized. The descriptive notes should not be written upon the same sheets as the drawings, and should be clear and concise, including only what the student has himself seen. Notes taken from lectures or reading should be kept entirely apart from the student's own observations.

No credit will be given for an herbarium. The time necessary to prepare an herbarium may better be devoted to a study of the living plants. (*1 credit.*)

11. Zoology

The candidate should possess a knowledge of the structure and relationships of a series of animals, gained primarily through the study of living forms and the dissection of specimens in the laboratory. At least four hours per week for one school year should be spent in actual laboratory work, which should include a study of the following forms, or their equivalents: amœba, paramœcium, hydra, starfish, sea-urchin, earthworm, crayfish, grasshopper, clam, slug, squid, dog-fish, pigeon, rabbit. The dissections should be made in as much detail as is indicated in Marshall and Hurst's Practical Zoology, which is recommended as a laboratory manual. Laboratory note books, certified by the instructor, must be submitted as evidence of the nature of the work, and must contain a full series of drawings and notes based on original dissections made by the student.

The practical work indicated above should be supplemented by such lectures or reading as will furnish a comprehensive knowledge of the groups studied. As a general reference book Parker and Haswell's Text-book of Zoology (Macmillan & Co., 1897) is recommended. (*1 credit.*)

12. Freehand Drawing

The student is expected to possess the power to draw so as to show that he sees, in something like an equal degree, the visual facts of (*a*) proportion and (*b*) relative lightness and darkness. It is impracticable verbally to define the exact degree of this power required. In general, it can only be said that such a degree of accuracy will be expected as might reasonably result from two hundred and forty hours of practice under good instruction. The candidate may draw almost anything which, in the opinion of the department, gives a basis for judging to what extent these ends have been attained. He may draw still-life, cast, portrait, architecture, or landscape. He will provide his own drawing materials for the examination, which may be whatever he is most accustomed to use, pen, pencil, charcoal, crayon, or brush.

(*1 credit.*)

13-16. History

Note-book Requirements.—In addition to the text-book preparation the candidate will be required, in each of the four history subjects, to submit a history note-book containing notes on all lectures and readings, copies of outlines, exercises, etc., prepared for use in his school work, and such other matter as may serve to indicate the nature of his study. Full particulars concerning this part of the requirement will be furnished, on application, by any of the instructors in History. They will also gladly make suggestions concerning methods of study and the selection of reference libraries.

13. Ancient History

a. The Oriental Nations.—The candidate should master Myers' General History, pp. 1-86, Fisher's Brief History of the Nations, pp. 1-58, and Adams' European History, pp. 1-16, or satisfactory equivalents.

b. Greece.—The best available text is Botsford's History of Greece (Macmillan, 1899). Oman's History of Greece, and Myers' General History, pp. 87-221, should also be studied. The pertinent volumes in the "Epochs of Ancient History" Series are

valuable for reference; also Cox's General History of Greece (Student Series).

c. Rome.—As a basis of study the pupil is advised to use Allen's Short History of the Roman People (reprinted in Myers' General History, pp. 222-365), and Pelham's Outlines of Roman History. For reference, use also Shuckburgh's History of Rome, How & Leigh's History of Rome, Bury's History of the Roman Empire (Student Series), and the "Epochs" Series.

(*1 credit.*)

14. Mediæval and Modern History

As a central text the student may use Myers' Mediæval and Modern History. This study should be supplemented by reference reading in other works, such as Duruy's History of the Middle Ages, Adams' Civilization During the Middle Ages, Duruy's History of Modern Times, Seignobos' Political History of Europe since 1814, and the "Epochs" Series. Much valuable source material may be found in the several volumes of Translations and Reprints published by the University of Pennsylvania.

(*1 credit.*)

15. History of England

The equivalent of Gardiner's Students' History of England, to Part X, and Porritt's The Englishman at Home. The Department of History will, on application, give suggestions with regard to equivalents, desirable supplementary readings, and methods of work. (*1 credit.*)

16. American History

A thorough knowledge of some advanced text book, such as Channing's Students' History of the United States, Montgomery's Students' History of the United States, McMaster's History of the United States, or the "Epochs of American History" Series, together with F. H. Clark's Outlines of Civics and Bryce's American Commonwealth (abridged edition). These should be studied topically, in connection with illustrative material such as is contained in American History Leaflets, Old South Leaflets, Hart's American History told by Contemporaries, and Sheldon's Studies in American History. MacCoun's Historical Geography of the United States will prove a valuable aid; and for further reading the American Commonwealths Series are recommended.

(*1 credit.*)

17. English Literature

a. Elementary

Candidates for admission who offer subject 17*a* will be examined in reading aloud. In connection with this examination they will be tested in their ability to follow the course of thought in ordinary prose and verse, to understand the structure of sentences, to catch simple allusions, and to see the force of simple figures of speech. A detailed list of the works read in preparation should be handed to the examiner when the candidate presents himself at the University. Blanks for this purpose may be obtained from the Registrar.

The teacher may make out the course of reading from the following list of books, choosing two books from Group I, one from Group II, one from Group III, three from Group IV, and four from Group V. [The word *or* is to be understood as permitting only one of the books among which choice is to be made.]

Group I.—Shakespeare's Merchant of Venice, Julius Cæsar, Macbeth; the four Gospels (one book), or the stories of the Creation and Fall, the Flood, Abraham, Isaac, Jacob, Joseph, and the Exodus, the books of Judges, Ruth, First and Second Samuel, Isaiah from chapter XL, and selections from the Psalms (one book), or Old Testament Stories, in Modern Readers' Bible Series.

Group II.—George Eliot's Silas Marner (½); Jane Austen's Pride and Prejudice (½); Goldsmith's The Vicar of Wakefield (½); Thackeray's The Newcomes, or Henry Esmond.

Group III.—Scott's Ivanhoe, Rob Roy, or Quentin Durward; Cooper's The Last of the Mohicans.

Group IV.—The Sir Roger de Coverley Papers; Irving's Alhambra, or Sketch Book; Hawthorne's House of the Seven Gables, or Twice Told Tales; Webster's First Bunker Hill Oration; De Quincey's Flight of a Tartar Tribe; Macaulay's Essay on Clive; on Warren Hastings; Carlyle's Essay on Burns.

Group V.—Pope's Rape of the Lock; a translation of Homer's Iliad, I, VI, XXII, XXIV; Goldsmith's Deserted Village (½); Gray's Elegy in a Country Churchyard (½); Burns's Tam o' Shanter and Cotter's Saturday Night (½); Byron's Prisoner of Chillon (½); Keats's Eve of St. Agnes; Coleridge's Ancient Mariner; Scott's Lay of the Last Minstrel, Lady of the Lake, or Marmion; Lowell's Vision of Sir Launfal (½); Tennyson's Enid and Geraint; Macaulay's Horatius (½). *(1 credit.)*

[Substantial equivalents for any book in the foregoing list will be accepted. The list of books prescribed for entrance subject 1 at the University of California is acceptable as a substitute, except that Classic Myths must be replaced by a book from Group II.]

b. Advanced

The examination in subject 17*b* will be similar to that in 17*a*, but the candidate will be expected to show greater insight and power of interpretation, and will be called upon to answer questions presupposing a thorough study of the books presented for the examination. Preparation should include a study of subject-matter, style, and structure.

Teachers may make out a course from the following list, selecting one book from Group I, one from Group II, and taking up the whole of Group III, or two books from Group I and three from Group II. Repetition of books offered for subject 17*a* should be avoided.

Group I.—Macbeth; Paradise Lost, books I and II; portions of the Bible; Spenser's Faëry Queene, Book I, Cantos I, II, and III; Chaucer's Prologue to the Canterbury Tales.

Group II.—Macaulay's Essay on Clive, on Warren Hastings, on Milton (½), on Addison (½), or Life of Johnson (½); De Quincey's Flight of a Tartar Tribe; Burke's Speech on Conciliation.

Group III.—Hales's Longer English Poems, omitting Spenser's Prothalamion and Shelley's Adonais, and employing only such annotations as are of value in giving a full understanding of the text; or Syle's From Milton to Tennyson, omitting Lycidas, the selections from Pope, Thomson, Johnson, Clough, and Browning, Shelley's Euganean Hills, and poems reckoned in 17*a*, V. For other omissions equivalents must be offered. (*1 credit.*)

[Fair equivalents for 17*b*, such, for example, as the books prescribed for entrance subject 14 at the University of California, will be accepted.]

18. Spanish

The preparation in Spanish should follow the same lines as those outlined below for French. The following books are recommended: Manning, Practical Spanish Grammar (Holt & Co.), or Loiseaux, an Elementary Grammar of the Spanish Language (Silver, Burdett & Co.), Matzke's First Spanish Readings (Heath

& Co.), Tamayo y Baus, Un Drama Nuevo (Jenkins, New York), Valdés, José (Heath & Co.). (*1 credit.*)

19. French

The requirements for Elementary and Advanced French are intended to be an equivalent of those agreed upon by the Conference of representatives from Columbia, Cornell, Harvard, Pennsylvania, Princeton, and Yale Universities.

a. Elementary

The requirements for Elementary French are as follows: 1. An accurate knowledge of the forms of the language, including the inflections, conjugations, and principal parts of verbs. Particular attention should be devoted to this part of the subject; constant drill in the verbal inflections, both written and oral, ought to give the desired results. Dictation exercises, where English forms are to be rapidly translated into French, are especially recommended. 2. The elements of French syntax, such as the uses of the article, the personal pronouns, and the subjunctive, the partitive constructions, and the agreement of the participles. 3. The ability to turn easy English into French. 4. The ability to translate ordinary French readily and rapidly. 5. The ability to pronounce French correctly. It is believed that a fairly good pronunciation of French can be obtained in the fitting schools, where students are still young and the organs of speech are more readily trained, if the necessary time is devoted to the subject. French pronunciation should be studied both theoretically and practically, and the differences of vowel qualities, of stress, pitch, and intonation between French and English should be pointed out.

These results ought to be secured from the careful study of an elementary grammar, such as Whitney's Practical French Grammar, Part I (Holt & Co.), or Grandgent's Short French Grammar (Heath & Co.), or Aldrich and Foster's Foundations of French (Ginn & Co.); in prose composition, from the study of the exercises belonging to these grammars and the translation of the first thirty-four pages of Grandgent's Selections for French Composition; in reading, from the study of from four hundred to six hundred duodecimo pages from the works of at least three different authors. While no definite authors are prescribed, the following are suggested as forming a suitable combination: Kuhn's French Reading for Beginners (Holt & Co.), Dumas, La

Tulipe Noire, Halévy, L'Abbe Constantin, Labiche, Le voyage de Monsieur Perrichon, and De Vigny, La Canne de jonc. For the study of pronunciation Matzke's Primer of French Pronunciation (Holt & Co.) is recommended. (*2 credits.*)

b. Advanced

The requirements for Advanced French are as follows: 1. A thorough knowledge of modern French Syntax. 2. The ability to turn modern French at sight into idiomatic English. 3. The ability to translate connected English prose into French. 4. The ability to write French from dictation.

These results ought to be secured from the study of the syntax in any of the usual school grammars, such as Whitney's Practical French Grammar (Holt & Co.), Edgren's Compendious French Grammar (Heath & Co.), or Bevier's French Grammar (Holt & Co.), and from the reading of from four hundred to six hundred duodecimo pages of prose and verse from at least four standard authors, in addition to the requirements for Elementary French. While no definite texts are prescribed, the following are recommended as forming a suitable combination: George Sand, La Petite Fadette, Merimée, Colomba, Victor Hugo, Hernani, Fontaines, Historiettes Modernes (D. C. Heath & Co.). The examination will include a test of pronunciation and the writing of French from dictation. (*1 credit.*)

20. German

The requirements in Elementary and Intermediate German are essentially those agreed upon by the Conference of representatives from Columbia, Cornell, Harvard, Pennsylvania, Princeton, and Yale Universities.

a. Elementary

A satisfactory preparation will require: The ability to translate easy German prose and verse at sight; an accurate knowledge of the principles of grammar, embracing especially inflections, word-order, syntax, the composition of words, the force of prefixes and suffixes, and the relation of the English and German consonantal changes; the ability to translate easy prose from English into German; also the ability to pronounce German and to recognize German words and simple sentences when spoken. Careful attention should be given to the rules for pronunciation, length of vowels, and accentuation, to insure the fluent and intelligent reading of the German texts used in the

class-room. This preparation would be represented approximately, in reading, by Brandt's, Whitney's, or Hewett's Reader, and the careful study of one or more modern dramas (about two hundred duodecimo pages of easy German); in grammar, by Whitney's, Brandt's, Joynes-Meissner's, or Thomas's Grammar; and in German prose, by the first twenty-six exercises in Harris's German Prose Composition. The work in German prose should be preserved in note books used exclusively for that purpose, written in ink, and consisting of the original work done by the student, followed by the corrected work approved by the teacher.

All candidates must present a statement from their former teacher of the amount of German read and the text-books used. (*2 credits.*)

b. Intermediate

A satisfactory preparation will require, in addition to the requirements for Elementary German: the ability to translate ordinary German prose and verse at sight; a thorough knowledge of word-formation, derivatives, and cognates; advanced German syntax, with especial reference to the uses of the tenses, the modal auxiliaries, and the subjunctive and infinitive moods; the ability to translate into German easy connected English prose.

It is believed that this preparation can be acquired by the careful reading of five hundred duodecimo pages of classical and contemporary prose and verse, in addition to the reading required for Elementary German. It is recommended that at least one-half of this reading be selected from the following works: Lessing's Minna von Barnhelm, Gœthe's Egmont, or Goetz von Berlichingen, Schiller's Wilhelm Tell, or Maria Stuart, Heine's Harzreise, Freytag's Bilder aus der deutschen Vergangenheit. For the preparation in translation from English into German the first fifty pages of von Jagemann's German Prose Composition, or its equivalent, is recommended. The work in German prose should be preserved in the manner suggested under Elementary German. It is desirable that candidates should acquire the ability to follow a recitation conducted in German, and to answer in simple German sentences.

All candidates are required to present a statement from their former teacher of the amount of German read and text-books used. (*1 credit.*)

c. Advanced

A fourth credit in German may be given to candidates who fulfill, in addition to the preparation required in Elementary and Intermediate German, the following requirements: Advanced German grammar and syntax; elements of the comparative grammar of English and German; study of Gœthe's Hermann und Dorothea, or Iphigenia, Lessing's Nathan der Weise, and Schiller's Wallenstein, and the reading of advanced literary and scientific German prose; advanced German prose composition, and the ability to follow lectures given in German.

Candidates will present statements from their former teachers of the work done. (*1 credit.*)

21. Latin

a. Elementary

The requirements for Elementary Latin include accuracy in pronunciation, a thorough knowledge of the forms, familiarity with the simpler principles of syntax, a vocabulary of from fifteen hundred to two thousand common words, and the ability to translate easy prose at sight, and to write simple sentences.

These attainments ought to be secured from the careful study of an elementary text-book and about one hundred and twenty pages of classical prose (for instance, four books of Cæsar and two or three orations of Cicero), together with daily exercise in oral or written composition and occasional practice at sight reading. The examinations in Latin Composition for 1901-02 will be based upon the second and fourth books of Cæsar's Gallic War, and the first two orations of Cicero against Cataline.

(*2 credits.*)

b. Advanced.

The requirements for Advanced Latin include the ability to translate at sight the simpler portions of Cicero's orations and Vergil's Æneid, familiarity with the principles of Latin hexameter, and the power to translate a passage of connected English based on Cicero.

These attainments ought to be secured from the careful study of four or five additional orations of Cicero and six books of Vergil's Æneid, if supplemented by daily exercises in composition in connection with the Cicero.

Much stress is laid upon the amount and character of the composition. The student should have a great deal of practice in

writing simple exercises illustrating rules and idioms, and also connected narrative based upon the prose authors.

(*2 credits; without the prose composition, 1 credit.*)

22. Greek

a. Elementary

Grammar, the inflections, the formation of words, and the essential points of syntax; Xenophon's Anabasis, books I-IV, or an equivalent; prose composition (Collar & Daniell's text-book is recommended); translation at sight of easy prose. It is expected of every student that he be able to read Greek aloud without stumbling. (*2 credits.*)

b. Advanced

Homer, Iliad, books I-III, or an equivalent; advanced prose composition. The candidate must show a thorough acquaintance with the forms and syntax of Homer, and must be able to scan any given passage exactly and to read it rhythmically. In the writing of Greek the candidate should have a year's training beyond that required in Elementary Greek. (*1 credit.*)

23. Biology

A course of study and laboratory work extending through one school year, the time divided equally between Botany and Zoology. The character of the work is indicated under the respective statements of Botany and Zoology (subjects 10 and 11).

(*1 credit.*)

24. Physiography

The equivalent of Davis's Physical Geography, with an approved laboratory and field course of at least forty exercises actually performed by the candidate. The original note-book, certified by the instructor, and recording, with dates, the steps and results of the observations made by the candidate, must be submitted as evidence of the nature of the work. (*1 credit.*)

25. Mechanical Drawing

The candidate is expected to have acquired neatness and accuracy in the use of drawing instruments. His course should have included practice in line work, lettering, machine or architectural working drawings, and tracing. He should present for inspection as much of his work as possible, duly certified by his teachers. As an examination the candidate may be called upon to make a simple working drawing of some specified object.

Equivalent to about one hundred and fifty hours of work under instruction. (½ *credit.*)

26-29. Shopwork

Subjects 26-29 are intended to be equivalent to the similarly named University courses scheduled under Mechanical Engineering.

Two things will be expected of the candidate who presents any one of these subjects for entrance credit: first, a certain amount of manual dexterity (i. e. handicraft), as evidenced by the neatness, accuracy, and dispatch with which he can execute a given piece of work; second, a knowledge of the nature and properties of the materials and tools used in the craft, coupled with a thorough understanding of the principles involved in its operations.

Candidates who have had work in manual training or similar schools should present note-books and pieces of work executed by them and certified by their instructors. Those whose training has been in commercial shops should, as far as possible, present letters from their employers stating clearly and in some detail the time they have been employed, the kind of work they have done, and its quality. Any candidate, no matter what his credentials are, may be required to undergo an examination. This may be oral, written, the actual execution of a set piece of work, or all combined. In each subject the ability to read and follow a working drawing is expected.

Below are given the more specific requirements for the particular subjects, with the understanding that the foregoing general requirements apply to them all.

26. Woodworking

The ability to recognize the common varieties of wood and some knowledge of their physical properties, such as ease of working, strength, toughness, hardness, etc., is expected. Candidates must be familiar with the uses of the principal hand tools of carpentry and with their care. They should be able to make the ordinary kinds of joints and splices. They should be familiar with the operation of the lathe, the jig, band, and circular saws and planing machines.

Equivalent to about two hundred hours of work under instruction in a manual training school, or a year in a commercial shop. (½ *credit.*)

27. Forge Work

This demands an elementary knowledge of the properties of wrought iron and steel, including the proper heats at which to work them. The management of forge and fire and the nature and uses of all the ordinary blacksmithing tools should be known. The candidate must be able to execute all of the common forging processes, including the various forms of welds in iron and steel; he is also expected to be able to harden, temper, and anneal the latter.

Equivalent to about two hundred hours of work under instruction in a manual training school, or a year in a commercial shop.

(*½ credit.*)

28. Foundry Work

The candidate should have a knowledge of the tools and processes used in the ordinary forms of green sand moulding, including core work. He should be familiar with the cupola and know how to charge and operate it. He must have a knowledge of the properties of cast iron and should have had experience in pouring cast iron as well as in moulding.

Equivalent to about two hundred hours under instruction in a manual training school, or a year in a commercial foundry.

(*½ credit.*)

29. Machine Shop

A knowledge of the tools and processes used in the cold-working of iron, steel, and brass is demanded of the candidate. He should be able to execute all forms of vise-work, such as chipping, filing, scraping, fitting, and finishing. He must be familiar, through experience in operating them, with the simpler forms of machine tools, such as the engine lathe, drill, planer, shaper, and milling machine. A knowledge of laying out work and adjusting it to be operated upon is expected of him, as is also the ability to keep both hand and machine tools in proper working condition.

Equivalent to about four hundred hours under instruction in a manual training school, or two years in a commercial shop.

(*1 credit.*)

A. Admission on Examination

Examinations in all entrance subjects are held at the University in August-September. Entrance examinations will also be held in January and May in subjects for which application is made, in writing, at least ten days before the first examination

day. The January and May examinations will be open only to matriculated students, for the purpose of making up entrance deficiencies, and to candidates for admission whose preparation is approved by their teachers. Blanks for this purpose, and specimen examination questions, may be obtained on application to the Registrar.

Entrance examinations are held in the following order (for dates see calendar, page 5):

First Day.—Elementary Algebra, 8:15; Advanced Algebra, 10:15; Plane Geometry, 1:30; Solid Geometry, 3:30; Trigonometry, 4:45.

Second Day.—Physiology, Elementary French, 8:15; Chemistry, Advanced French 10:15; English History, 1:30; English Composition, 3:30.

Third Day.—Physics, Spanish, 8:15; American History, Elementary German, 10:15; Zoology, Intermediate German, 1:30; Advanced German, Elementary Latin, 3:30.

Fourth Day.—Botany, Advanced Latin, 8:15; Mediæval and Modern History, Elementary Greek, 10:15; Freehand Drawing, Advanced Greek, 1:30; Ancient History, 3:30.

For the present examinations will not be formally set in subjects 23-29; in special cases examinations may be arranged during the third and fourth examination days.

Candidates for admission may, if they prefer, take a part of their examinations a semester or a year before they propose to enter; but account will not be taken of an examination passed more than sixteen months before the proposed time of entering.

B. Admission on Recommendation

A candidate fulfilling all the requirements for admission in full standing to Bryn Mawr, California (Groups I or II), Chicago, Columbia, Cornell (A. B. course), Harvard, Johns Hopkins, Michigan, Smith, Vassar, Wellesley, or Yale, will be admitted to full undergraduate standing without further tests.

Preliminary credits secured by passing the regular entrance examinations of any of the institutions named above, or of the College Entrance Examination Board of the Middle States and Maryland, may be offered, in place of recommendations from approved schools, in subjects corresponding to those outlined in the preceding list.

Entrance credits may also be granted, without examination, on the recommendation of the principal of any reputable preparatory school, subject to the following conditions:

1. The candidate must have completed a full course in the school and have been duly graduated after at least one year's attendance.

2. The candidate must be specifically recommended by the principal in the subjects in which exemption is sought.

3. The University reserves the right to reject the recommendation in any particular subject, if for any reason the work done is deemed insufficient or unsatisfactory.

4. In English Composition recommendations must be supplemented by an acceptable exercise book, duly certified by the teacher, or by a satisfactory exercise in writing English, at the University.

5. In Physics, Physiology, Botany, Zoology, Drawing, Biology, and Physiography recommendations must be supplemented by acceptable drawings and laboratory note-books. These note-books should contain the actual notes taken in the laboratory, not copies; and drawings and notes must be certified by the teacher. In Physics the candidate must also pass an examination in the text-book work, at the University.

6. In all History subjects (completed since 1898) recommendations must be supplemented by acceptable note-books, duly certified by the teacher.

7. In English Literature recommendations must be supplemented by an acceptable oral examination, at the University.

8. In French and German (completed since 1899) recommendations must be supplemented by acceptable exercise books in Prose Composition, duly certified by the teacher.

9. In Advanced Greek recommendations must be supplemented by acceptable exercise books in Prose Composition, duly certified by the teacher.

10. Recommended graduates of the San Jose, Los Angeles, Chico, and San Diego State Normal Schools may be admitted, without examination, except in English Composition, to provisional undergraduate standing, such standing subject to revision after one year's attendance.

A candidate presenting acceptable recommendations in subjects aggregating *fifteen* credits may be assured of admission to the University, notwithstanding various supplementary tests which

must be met. But final entrance credit in any particular subject will not be given until all required tests have been satisfactorily met.

Recommendations will be considered at any time of the year, but since, in general, candidates cannot be assured of admission to the University without examination in one or more subjects, it is important that recommendations be forwarded as early as possible.

Blanks for admission on recommendation may be obtained from the Registrar.

II. AS SPECIAL STUDENTS

Persons under twenty-one years of age will not be received as special students.

The privileges extended to special students are not intended for those who come directly from the schools, with insufficient preparation for regular standing, but for those who are qualified by age, character, practical experience, and habits of study to profit by university courses. Such properly qualified persons may be admitted as special students, without fulfilling the regular entrance requirements, upon presenting satisfactory credentials and testimonials.

Special students are subject to the same University regulations as regular undergraduates, and they may become candidates for graduation upon fulfilling all University requirements, including those for entrance.

A failure on the part of any special student to maintain a good standing in the studies to which he is admitted will at once sever his connection with the University; and a special student suspended for failure in University work may be readmitted only upon attaining regular undergraduate standing.

Blank applications for admission as special students may be obtained from the Registrar.

III. TO ADVANCED STANDING

Students from other institutions of recognized collegiate rank, who present letters of honorable dismissal, may be admitted to such standing and upon such terms as the Faculty may deem equitable. Students from institutions of equivalent rank, who maintain a satisfactory record after admission, may expect to receive the same standing as at the former institution, except that no such student can be given more than three years' advanced credit (ninety hours toward graduation). Every candidate is required

to present, along with a catalogue of the institution in which he has studied, a full statement, duly certified, of the studies he has completed, including studies passed or credited at entrance.

Recommended graduates of the San Francisco State Normal School, and of other approved State Normal Schools where the normal training has been preceded by a full four years' high school course, may be granted an advanced credit of not more than thirty hours.

Blank applications for admission to advanced standing may be obtained from the Registrar.

All applications for advanced standing on the basis of work done before entering the University must be filed within one year after matriculation; and such applications will not be received at a later date.

IV. TO GRADUATE STANDING

Graduates of this University, and of other institutions of recognized collegiate rank, may be admitted to graduate standing in the University upon presentation of diplomas or equivalent credentials. They may become candidates for advanced degrees upon fulfilling the conditions prescribed by the Faculty. In case they become candidates for the baccalaureate degree, the question of hours required for graduation may be waived and the degree conferred on the satisfactory completion of not less than thirty hours of University work and the fulfillment of all major and minor requirements. Graduate students not candidates for any degree, may be admitted, upon the approval of the major professor, to such work as their previous training seems to warrant.

University Residence

Registration

On the appointed Registration Days, in September and January, each student must obtain a certificate of registration in *person*, at the Registrar's office.

Matriculated students may register after the appointed Registration Days only upon payment of an additional fee of two dollars.

Study Card

At the Registrar's office the student receives a card for selection of studies for the semester. This card, properly filled out, and approved by the major professor, must be filed with the Registrar within ten days after the beginning of the semester. After this date study cards will be accepted only upon payment of a special fee of two dollars. Students registering after this date must have their study cards indorsed by all the instructors under whom work is taken.

Enrollment in Classes

A student desiring to enter any class must present his certificate of registration to the instructor for enrollment at the beginning of each semester. Whether the student is qualified for enrollment in any particular class is a question to be decided by the instructor in charge. In general, the pre-requisites for taking any given course are noted under "Courses of Instruction."

Change of Studies

A student desiring to drop a subject once taken up, or to take up a new subject after the study card has been filed, must present to the Committee on Registration of Studies a petition for such change, approved by the major professor and by the instructors whose subjects are to be taken or dropped. In general, petitions so approved, if they do not give the student too many hours or too few hours, and if presented within one month after the beginning of the semester, are granted without question. If presented at a later time in the semester they will be granted only for extraordinary reasons; if otherwise acceptable but presented after the close of the semester, they will be granted

only on payment of a special registration fee of two dollars for each course.

Change of Major Subject

Petitions to change the major subject will be granted when approved by the professors in charge of both the old and the new subjects, the student being held to all the requirements of the new major subject. In general, the major subject may be changed at the end of the first year, and in some cases later, without appreciable loss of time to the student.

Amount of Work

Fifteen hours per week of recitations or lectures, or their equivalent in laboratory work, constitute an average semester's work. Students may register for as few as *thirteen* or as many as *eighteen* hours, except that where conditions or failures have been incurred in the preceding semester not more than *fifteen* hours may be registered unless by special permission of the Committee on Registration. Permission to register for less than *thirteen* hours may be granted for special reasons. Petitions for irregular hours should be presented at the beginning of the semester.

Every hour for which credit is given is understood to represent approximately, for the average student, three hours of actual work per week, through one semester. Thus, in lecture or recitation work, one hour is allotted to the lecture or recitation and two hours for preparation or subsequent reading and study on the part of the student. Where the time is wholly occupied with drawing, field, or laboratory work, three full hours per week through one semester are expected of the student for each hour that counts toward graduation. Where the drawing, field, or laboratory work is supplemented by systematic outside reading or experiment under the direction of the instructor, such a reduction may be made in actual drawing, field, or laboratory time as seems just to the department concerned.

Conditions and Failures

A student conditioned in any subject may arrange with the instructor concerned for such supplementary examinations or study as will make good the deficiency; but such deficiency must be removed within one year after the condition is incurred, otherwise the condition will be considered a failure. Work reported as incomplete must be made up within one semester. A student failing in any subject cannot receive credit for the portion in which the failure is incurred, until the subject has been re-reg-

istered and taken over again in class. A condition or failure, or withdrawal from class without permission of the Committee on Registration of Studies, limits the student to *fifteen* hours the semester following.

Entrance Conditions

Students admitted to partial standing may make up deficiencies by (1) completing before graduation, in addition to the one hundred and twenty hours required for graduation, five hours of University work for each entrance credit lacking (except in the case of English Composition, which must be passed on examination); or (2) by passing entrance examinations in the additional subjects necessary, provided such examinations are passed within one year after admission to the University. All supplementary tests necessary to give final entrance credit in any recommended subjects must be fulfilled within one year after matriculation.

From Special to Regular Standing

Special students may be entered in regular standing and become candidates for graduation, on passing examinations in the required number of subjects. In place of entrance examinations University work to the amount of five hours for each entrance credit may be offered in University subjects which are also included in the entrance group.

University Credit for Extra Entrance Subjects

Credit toward graduation may be given for entrance subjects in excess of the number required for admission, provided such extra entrance subjects are also University subjects, and are successfully continued in the University within two years after matriculation, and provided the student's general University record is deemed proof of superior scholarship. Applications for such University credit must be made within two years after matriculation. After matriculation additional entrance credits may be offered only for the purpose of making up entrance deficiencies, except that recommended subjects requiring supplementary tests for final credit may be counted as extra entrance subjects, if such supplementary tests are fulfilled within one year.

University Credit for Special Courses

University credit is given only for work done in residence at the University. Work prescribed by any professor, of such a nature that it cannot be done at the University or can be more advantageously done elsewhere, may be regarded as work done in resi-

dence. But such special work must be duly registered in advance and must be included in the thirty-six hours permitted for any calendar year.

Advanced Standing from Other Institutions

Advanced standing for work done before matriculation will generally be given only when certified as having been completed in some institution of recognized collegiate rank, or, in particular cases, to recommended graduates of approved State Normal Schools (see p. 49). In special cases also permission may be given by the Faculty to receive credit on examination for work equivalent to regular University courses. Applications for advanced standing on the basis of work done before entering the University must be made within one year after matriculation.

Leave of Absence

A student desiring to leave the University for a brief time should apply to the Committee on Registration. If leave of absence is desired on account of sickness the petition must be indorsed by the Professor of Hygiene. A leave of absence is merely a justification of the absence and not a relief from the work that has been missed. A leave of absence is usually necessary only in case of interrupted work; a student in good standing absent one or more semesters may re-enter at the beginning of any semester without formal petition.

EXPENSES OF THE STUDENT

Fees

Graduate students in Law and Engineering and undergraduate students in full standing, are charged a registration fee of *ten dollars* per semester; undergraduates in partial standing and special students, *fifteen dollars* per semester. In addition, students in laboratory courses pay for the materials which they use, and in various courses syllabus fees are charged. The payments required in advance are different for the different courses, ranging from *fifty cents* to *twenty-five dollars* per semester.

Cost of Living

The cost of living in Roble Hall, including board, furnished rooms, light, heat, and attendance, averages about twenty-five dollars per month. Students furnish their own linen, blankets, towels, and napkins. Rooms in Encina Hall, similarly furnished, but without board, cost from $4.50 to $5.50 per month, with two in a room. There are a few single rooms at $7 per month.

Students occupying a double room alone pay the full price of the room. Each double room is furnished with two single beds. Rooms may be reserved in advance by making a deposit of two dollars.

In Palo Alto and College Terrace, at an average distance of a mile and quarter from the University, good rooms and board, in private houses, can be obtained at from eighteen to twenty-five dollars per month. A considerable number of students live in co-operative clubs, in which good board and rooms may be had for fifteen dollars per month. These rooms are lighted and heated, but usually unfurnished. Special commutation tickets are issued by the Southern Pacific Company, and students living in towns on the line of the railway, from San Francisco to San Jose, can easily go to and from the University daily. Carriages connect with all trains at Palo Alto. A careful list of available rooms and boarding places outside the Halls is compiled a week or ten days before the opening of the University year, and is on file for easy reference at the Information Bureau of the Christian Associations, in the quadrangle. New students will find no difficulty in securing suitable accommodations upon their arrival.

The University Inn, located near the quadrangle, has dining accommodations for about three hundred students. The cost of board during 1900-01, wholly on the order plan, has varied according to the taste and means of the student, ranging between $15 and $20 per month.

Books and stationery will average from eighteen to twenty-five dollars per year.

The expenses of the student, exclusive of clothing and railway fares, need not exceed $225 to $300 per year.

MEMORIAL SCHOLARSHIP

The LELAND STANFORD JUNIOR SCHOLARSHIP, established by the surviving founder, in 1900, in memory of her son, pays the necessary expenses of its holder throughout the undergraduate course. The first holder is Mr. John Titus Cooper, of Los Angeles.

SELF-SUPPORT OF STUDENTS

A considerable number of students manage, in one way or another, to earn the whole or a part of their expenses while attending the University. Such opportunities occur in the line of office and laboratory assistance, personal services of numerous kinds, and the management of various student enterprises.

The Christian Associations, under the supervision of the Faculty Committee on Student Employment, register without charge all students who apply for employment, and supply employers with student labor as demanded. In general, the demand and supply are very nearly equal, but the Committee desire to call the attention of new students who intend to earn the whole or a part of their living, to the following results of their experience:

1. Except during the last two months of the second semester, there is a constant *over-supply* of those wishing to do teaching, clerical labor, typewriting, and stenography. None but those having superior qualifications and experience are likely to secure employment the first semester.

2. There is constant demand for men and especially women students who can do domestic labor of any kind; many earn board and room rent by waiting on table, washing dishes, general housework, house cleaning, gardening, etc.

3. Students who can do any kind of domestic or manual labor *well*, and who have thoroughly good health, can earn their board by three hours' work per day, or board and room by four hours' work per day. Those who have learned a trade find it comparatively easy to earn their expenses, obtaining employment as barbers, plumbers, bookbinders, printers, mechanics, carpenters, electricians, engineers, etc. But the Committee strongly advise that no student should come to the University without resources sufficient for the expenses of one semester. There have been several instances of failure in studies and serious ill-health on the part of those who have come without resources.

4. The University curriculum is adapted to those who have control of their entire time for study. No student who must earn his living, therefore, should undertake to graduate in four years.

5. No student should come expecting to earn money, who can do nothing well; skill is absolutely essential, as competition is quite as severe in the college community as elsewhere.

Students' Guild

The STUDENTS' GUILD is a regularly incorporated association for mutual assistance in cases of sickness or other unusual emergency. Its resources are mainly the voluntary contributions of students and faculty, fifty cents per semester being the ordinary subscription. The Guild employs a trained nurse who is constantly in attendance at the University.

Graduation

Candidates may present themselves for graduation in January, May, and September.

No degree will be granted to any person who has not spent at least one year in resident study at the University. No honorary degrees are given.

Bachelor of Arts

The degree of Bachelor of Arts (A. B.) is granted to students who have satisfactorily completed the equivalent of four years' work of fifteen hours of lecture or recitation weekly, or a total of one hundred and twenty hours, and who have also satisfied the requirements in major and minor subjects.

Each student selects as his major subject or specialty the work of some one department. This department has the authority to require the completion of this *major* subject, and also of such *minor* subjects in other departments as may be considered necessary or desirable collateral work. Such major and minor requirements taken together will not exceed forty hours of University work, or one-third of the student's time for the four years of undergraduate work.

With these exceptions, all the undergraduate work in all departments is elective. The student may freely choose for such elective work any subject taught in the University, which his previous studies have prepared him to undertake.

The professor in charge of the major subject of any student is expected to act as adviser to the student in educational matters, and the recommendation of such professor is necessary to graduation.

Bachelor of Laws

The professional degree of Bachelor of Laws (LL. B.) is granted to students who have previously received the academic degree of Bachelor of Arts, or its equivalent, and who have completed fifteen courses in Law, exclusive of Elementary Law and the Special Courses in Law, provided they have spent two years in resident study at the University, one year of which has been as graduate students. Special students (and others at least twenty-one years of age at matriculation) who have spent three years in resident study at the University and have completed the above work with distinguished excellence, will also be given the degree of Bachelor of Laws.

Advanced Degrees

Admission to Candidacy

Every applicant for an advanced degree must file at the Registrar's office not later than the beginning of the semester preceding that in which the degree is sought, a formal application including a statement of the proposed course of study. This application must be approved by the major professor, and upon acceptance by the Faculty the applicant is admitted to candidacy for such advanced degree. It is advisable that such application be made as early as possible in the student's course. Where a thesis is required it shall be upon a subject approved by the major professor, and, if for the doctor's degree, shall be presented in its final form at least six weeks before the close of the semester in which the degree is sought. Accepted theses for the master's degree, shall be bound in a uniform style and deposited in the University Library. No advanced degree will be conferred except upon the recommendation of the appropriate Faculty committee.

Master of Arts

The degree of MASTER OF ARTS (A. M.) is conferred upon graduates of this University, and upon others who have had an equivalent training elsewhere, on the satisfactory completion, in residence, of one year of graduate work, beyond the baccalaureate requirements of the department in which the degree is sought, and on the presentation of an approved thesis, or the passing of a satisfactory examination, or both. At least two-thirds of the year's work required of the candidate is to be devoted to the major study. Work done in the University outside of the requirements for the degree must be registered, but will not be taken into account in connection with the degree.

Special regulations are as follows:

1. A report upon the character of the work done will be made by each instructor under whom a candidate is registered.

2. Some evidence of ability to do original work is required of every candidate. In addition, therefore, to examination, a thesis is expected, unless such evidence is furnished in other ways.

Engineer

In the departments of applied science the professional degree of ENGINEER is conferred upon graduates of this University, and upon others who have had an equivalent training elsewhere, on the satisfactory completion, in residence, of one year of professional study beyond the baccalaureate requirements of the department in

which the degree is sought, and on the presentation of an approved thesis, showing ability to do independent work.

Doctor of Philosophy

The degree of DOCTOR OF PHILOSOPHY (Ph. D.) is conferred upon graduates of this University, and upon others who have had an equivalent training elsewhere on the satisfactory completion of at least three years of graduate work, beyond the baccalaureate requirements of the department in which the degree is sought, under the following conditions:

1. The degree is given only on the ground of advanced scholarship and the ability to do independent work in some special line, and not for merely faithful study for a prescribed time or course, nor for miscellaneous study. Three years represent the minimum time in which the degree can be obtained and often a longer period of study will be necessary.

2. Graduate work done elsewhere may be accepted in place of resident study in this University; but in no case will private study without sufficient guidance, or pursued at a distance from libraries or laboratories or other necessary facilities, be accepted as an equivalent; and no degree will be granted to any person who has not spent at least the last year of such study in residence at this University.

3. The course of study shall embrace one major subject and one or two minors in related departments. The minor subject or subjects shall represent approximately one-third of the course of study; except that such minor subjects may be waived, on the recommendation of the department in which the major subject is taken and with the approval of the Faculty, whenever the general preparation or special needs of the candidate make such a course seem desirable.

4. The candidate must present a thesis of such a character as shall display power of original and independent investigation and constitute an actual contribution to knowledge. He must guarantee the printing of the thesis, in a form approved by the Faculty, within one year after the degree is conferred, and must deposit one hundred copies in the University Library.

5. The candidate must sustain such final examinations in major and minor subjects as may be prescribed by the departments in which studies are taken, and also shall submit to such tests or examinations as may be required by the special Examining Commit-

tee of the Faculty. This special committee shall be respon ible for the fitness of the candidate.

The special Examining Committee shall consist in each case of (1) the professor in charge of the major subject, (2) the one or more professors in charge of the minor subjects, (3) two members of the Committee on Graduate Study whose departments lie nearest to that of the major professor, and (4) the Chairman of the Committee on Graduate Study, acting as its secretary.

6. In addition to the foregoing conditions prescribed by the University, the Faculty will, in general, insist upon the following conditions: (*a*) That all candidates be required to show a reading knowledge of French and German; (*b*) That, whenever practicable, the departmental examinations, in both major and minor subjects, be written, the papers of candidates to be submitted to the special committee prior to the day fixed for the final test before that committee; (*c*) That examinations in minors be held not earlier than the second semester before the time named for conferring the degree.

Courses of Instruction

[*Courses for 1900-01, with Announcements for 1901-02.*]

GREEK

Augustus Taber Murray, Ph. D., Professor of Greek.

Walter Miller, A. M., Professor of Classical Philology.

Henry Rushton Fairclough, Ph. D., Professor of Classical Literature.

Harold Struan Muckleston, A. M., Instructor in Greek.

UNDERGRADUATE COURSES

The undergraduate courses in Greek are intended to train the student carefully in the language itself, to acquaint him with the authors studied as representing the great departments of literature, and to enable him to approach intelligently the problems of Greek life and Greek thought. The instruction in the lower classes is given chiefly by means of recitations, but as the student advances these are supplemented by lectures.

It will be seen that provision is made for those who have had no Greek before coming to the University.

1. Elementary.—Grammar; translation of easy prose; Greek composition. After the essential grammatical forms have been mastered, passages of continuous prose are taken up for translation, and, as soon as is practicable, the Anabasis. The student is made familiar with the ordinary forms of syntax, and exercises in writing Greek are regularly introduced. This course does not count as a part of the major work for students in Greek.

5 hrs., both semesters. (Muckleston.)

2. Herodotus and Homer.—Selections from Herodotus and the Odyssey. Course 2 is open to those who have offered subject 22 on entrance, or who have completed course 1 in the University.

3 hrs., 1st semester. (Miller.)

3. Plato and Lysias.—A continuation of course 2. The Apology and Crito, and selections from Lysias.

3 hrs., 2d semester. (MILLER.)

4. Prose Composition and Sight Translation.—Simple Prose is taken up for sight reading, and the exercises are based upon the text read. Course 4 is required of all students in courses 2 and 3 who are making Greek their major study.

2 hrs., both semesters. (MURRAY.)

5. Homer.—A critical study of the Iliad, with discussions and papers on Homeric topics. Open to those who have completed courses 2 and 3, or an equivalent.

3 hrs., 1st semester. (FAIRCLOUGH.)

6. Oratory.—Jebb's Selections from the Attic Orators, with lectures. A continuation of course 5.

3 hrs., 2d semester. (FAIRCLOUGH.)

7. Prose Composition and Sight Translation.—Selections for translation will be made from the historical and philosophical writers. A variety of practical exercises in Greek composition will be prepared according to the needs of the class. Open only to those who have completed course 4, or an equivalent, but required of major students before graduation.

2 hrs., both semesters. (FAIRCLOUGH.)

8. Classical Mythology.—A study of the Greek and Roman myths, illustrated by ancient sculptures and vase-paintings. Lectures, illustrated with stereopticon, and recitations.

2 hrs., 1st semester. (MILLER.)

9. History of Greek Sculpture.—From the earliest times down to the time of Alexander. Lectures, illustrated with stereopticon, and recitations.

2 hrs., 2d semester. (MILLER.)

10. Greek Testament.—The Harmony of the Gospels in Greek. *1 hr., both semesters.* (MILLER.)

11. Greek Tragedy.—The Prometheus of Aeschylus, the Antigone and Electra of Sophocles, and the Hippolytus and Iphigeneia Taurica of Euripides are read and interpreted. Other plays are assigned for private study, and lectures on the drama are from time to time given.

3 hrs., both semesters. (MURRAY.)

12. Plato and Demosthenes.—The Phaedo and the De Corona are read and interpreted.

3 hrs., 1st semester. (FAIRCLOUGH.)

13. Thucydides.—Books VI and VII, the Sicilian Expedition. (Courses 12 and 13 alternate with course 11, and will not be given in 1901-02.)

3 hrs., 2d semester. (FAIRCLOUGH.)

GRADUATE COURSES

The graduate courses in Greek are intended especially for those who are working for advanced degrees or who are looking forward to teaching. They differ from the undergraduate courses announced above, in that they claim a larger share of the student's time and lead him to a broader and more comprehensive knowledge of the language and literature. He is introduced to higher philological work and is trained through critical studies for original research.

The center of the work is the Greek Seminary—made up of the director and such students as satisfy him of their fitness for the work. The seminary meets weekly for the critical interpretation of some Greek author, the different members, in turn, filling the post of interpreter. Topics for investigation are assigned, and papers prepared by the members are read and discussed.

Members of the seminary are expected to supplement their critical work by wide reading, and lectures on the author or authors under discussion are given by the director. The seminary is under the direction of Professor MURRAY, assisted by Professor FAIRCLOUGH.

14. The Greek Seminary.—In 1901-02 the Seminary will be occupied with the study of Theocritus, Bion, and Moschus. The critical studies undertaken will be accompanied by lectures on the Alexandrian Age and on the influence of Greek Bucolic Poetry on later literatures. [Students should provide themselves in advance with the edition of Fritzsche-Hiller (Leipzig, Teubner, 1881), and the text-edition of Ziegler (Tübingen, 1879). There is an edition with brief Latin notes by Paley (Cambridge, 1869), and an English school edition by Kynaston (Oxford, 1892). All students should possess also a good annotated edition of Vergil's Eclogues.] *2 hrs., both semesters.* (MURRAY, FAIRCLOUGH.)

15. Alexandrian Poetry.—Readings and lectures.

1 hr., both semesters. (MURRAY, FAIRCLOUGH.)

SPECIAL LECTURES

Throughout the year Professor Murray gives weekly lectures on Greek Epic and Dramatic Poetry. These lectures are intended for general literary students and do not presuppose a knowledge of Greek; they will not count as a part of the major work for students in Greek.

16. The Greek Epic. *1 hr., 1st semester.* (Murray.)

17. Greek Tragedy. *1 hr., 2d semester.* (Murray.)

SANSKRIT

1. Elementary.—Grammar; lectures on the Sanskrit language and literature and the principles of comparative philology. The mastery of the forms is followed by reading from Lanman's Sanskrit Reader and drill on comparative forms.

2 hrs., both semesters. (Miller.)

LATIN

Ernest Mondell Pease, A. M., Professor of the Latin Language and Literature.

Walter Miller, A. M., Professor of Classical Philology.

Henry Rushton Fairclough, Ph. D., Professor of Classical Literature.

Jefferson Elmore, Ph. D., Instructor in Latin.

UNDERGRADUATE COURSES

The aim of the undergraduate courses in Latin is to give the student a somewhat systematic knowledge of the language and its development, an acquaintance with the representative authors of Latin literature, and some insight into the life, culture, and civilization of ancient Rome. The instruction is given chiefly by means of recitations and informal lectures. As the student advances he is encouraged to make more and more use of the library, and to become familiar with the standard books of reference.

1. Cicero and Vergil.—Cicero, five orations; Vergil, six books of the Æneid; exercises in Latin composition. This course is planned for those who have passed in entrance subject 21*a*. It is regarded as preparatory to the work required of major students in Latin. *5 hrs., both semesters.* (———)

2. Cicero, Livy, and Terence.—Cicero, De Senectute; Livy, books XXI-II; Terence, Andria. Open to students who have passed in course 1, or in subject 21*b* of the entrance requirements. Three sections. In section I, intended for students whose major is Latin (or Greek), it is proposed to give the thorough drill necessary as a basis for future classical study in the University. In sections II and III, intended for students whose major study is not the classics, the chief aim will be, after a hurried grammatical review, to gain as great facility as possible in reading Latin.

3 hrs., both semesters. (PEASE, MILLER, ELMORE.)

3. Translation at Sight, and Latin Composition.—This course is open to students who are taking course 2, and is required of major students in Latin. Training in the rapid reading of Cicero's De Amicitia, Livy, book I, and Nepos will be given one hour a week; the other hour will be devoted to Latin composition in connection with the Cicero and Livy of course 2, and to the study of the private life of the Romans in connection with the Terence. *2 hrs., both semesters.* (ELMORE.)

4. Livy, Terence, and Selections from Lyric Poets.—This course is designed to take the place of the second semester's work of section III, course 2. It is intended for those who do not expect to read the Lyric Poets more extensively in later courses, and is also suitable for those entering the University the second semester.

3 hrs., second semester. (ELMORE.)

5. Tacitus and Horace.—Selections from the works of Tacitus and from the Satires, Odes, and Epistles of Horace. This course, open to those who have passed in course 2, will aim at giving a comprehensive view of these authors and their place in the literature. Attention will be directed especially to the style and subject matter, and to the literary history of the times.

3 hrs., both semesters. (ELMORE, PEASE.)

6. Translation at Sight and Latin Composition.—This is open to students who have taken course 3. One hour a week the class will read selections from Plautus or Terence, Cicero, and Tacitus. Special effort will be made to get at the Roman point of view, and to grasp the meaning in the order of the Latin. The exercises for translation into Latin will be prepared to suit the needs of the class. Conversation and the writing of epistles in Latin will be made a feature of the course.

2 hrs., both semesters. (FAIRCLOUGH.)

7. Latin Comedy.—In this course the Menæchmi of Plautus will be studied with particular reference to the early forms, constructions, and metres; and that followed by the more rapid reading of the Captivi and Rudens of Plautus, and the Andria and Phormio of Terence. Considerable attention will be paid to a comparison between ancient and modern comedy, the development of Latin comedy, the early theatre, and the method of presenting a play.

3 hrs., 1st semester. (Fairclough, Elmore.)

8. The Letters of Cicero.—The aim will be to get a view of Cicero and his times from the original sources, to see some of the causes for the breaking down of the Republic, and to become familiar with official procedure in the judicial and legislative bodies. Special attention will be paid to the familiar style of the letters. *3 hrs. 2d semester.* (Pease.)

9. Catullus, Tibullus, and Propertius.—Selections from these authors will be studied, largely with reference to the thought and artistic form, and compared with similar poems of other writers. Other selections will be read in translation in order to gain a comprehensive view of their works as a whole. [Course 9, alternating with course 10, will not be given in 1901-02.] *2 hrs., 1st semester.* (Pease.)

10. Lucretius.—Selections from the De Rerum Natura will be read with particular attention to the philosophic thought and its poetic treatment. *2 hrs., 1st semester.* (Miller.)

11. Quintilian.—In connection with the study of the subject matter of books X and XII, considerable attention will be paid to literary criticism and to the history of Roman literature. [Course 11, alternating with course 12, will not be given in 1901-02.] *2 hrs., 2d semester.* (Miller.)

12. Roman Society in the First Century.—Illustrative selections will be read from the Satires of Juvenal and the Epigrams of Martial. Supplementary reading will be assigned in various writers on that period.

2 hrs., 2d semester. (Miller.)

13. Teachers' Course.—This is a course of lectures and recitations intended for those who expect to engage at once in preparatory teaching. The lectures will treat of the aims and methods of teaching preparatory Latin, the books and other helps serviceable to teachers, and such practical subjects as

pronunciation, sequence of tenses, indirect discourse, and the like. There will also be practice in writing Latin and in teaching. Portions of the authors suitable for preparatory work will be read in class, and the members will serve in turn as teachers under the supervision of the instructor. Opportunity will be given to visit preparatory classes in the vicinity, and a report will be presented by each member. [This course, alternating with course 14, will not be given in 1901-02.]

2 hrs., 2d semester. (PEASE.)

14. Monuments of Ancient Rome.—A rapid survey of the architectural growth and topography of the ancient city, including an account of the walls, streets, aqueducts, bridges, fora, temples, basilicas, theatres, amphitheatres, circuses, baths, arches, palaces, tenements, shops, columns, tombs, etc. All the references of importance in Latin and Greek literature throwing light upon the monuments will be presented to the class by the different members. Open to third and fourth year students and to graduates. *2 hrs., 1st semester.* (PEASE.)

15. Latin Composition.—A course in the study of style, with practice in translating and writing Latin at dictation. Open to third and fourth year students and to graduates.

2 hrs., 2d semester. (PEASE.)

16. Roman Law and Institutions.—Lectures will be given upon the leading principles of Roman Law; and the more important institutions of the Republican period will be studied according to the topical method. This course, open to all who have a reading knowledge of Latin, may be taken as a one-hour or a two-hour course. [This course will not be given in 1901-02.]

1 hr., 2d semester. (FAIRCLOUGH.)

17. Thesis.—Advanced students who desire some training in the methods of original investigation, may, by permission, register for one or two hours of thesis work. Credit for such work will be granted on the completion of a satisfactory thesis in accordance with the requirements of the department. For certain subjects, such for instance as the literary history of a period, an examination, supplemented by a carefully prepared bibliography and syllabus, may be substituted for the thesis.

18. The Roman Drama.—This course consists of lectures on the development of the Roman drama, together with the reading in translation of the more important plays of Plautus,

Terence, and Seneca. It is intended for the general literary student, and does not presuppose a knowledge of Latin.

1 hr., 2d semester. (ELMORE.)

GRADUATE COURSES

The graduate courses in Latin are intended primarily for students who are looking forward to teaching as their profession. Their aim is to give a wider acquaintance with the language and literature than is usually afforded in undergraduate courses, and to offer training in philological criticism and in the methods of scientific research.

19. Latin Seminary.—In 1901-02 the Seminary will be occupied with the study of the Apocolocyntosis of Seneca and the Cena Trimalchionis of Petronius. The meetings will be devoted to the interpretation of these authors, and to the presentation of papers containing the results of special investigation. The Seminary is open to graduate students who satisfy the directors of their fitness for the work. (Students should provide themselves in advance with Buecheler's edition of Petronius, Berol. 1895, M. 3.) *1 hr., both semesters.* (PEASE, FAIRCLOUGH.)

20. Vergil.—The Georgics will form the basis for a study the literary art of Vergil. Open to graduates and advanced undergraduates.

1 hr., 1st semester. (FAIRCLOUGH.)

21. Literature of the Empire.—Lectures, accompanied by readings in class and in private. Open to graduates and advanced undergraduates.

2 hrs., 2d semester. (FAIRCLOUGH.)

22. The Career of Cicero.—This course will consist of a systematic study of Cicero's life from year to year in all his varied activities, and will include a wide reading in the literature, particularly in Cicero's Letters and Orations. The meetings will consist of lectures, readings, and reports on assigned topics. The attempt will be made to bring together in systematic form all the material in the literature that will throw light on his private and public life, and to gain as wide an acquaintance as possible with his works.

The course will be specially helpful to those who expect to teach Cicero and Cæsar in the Secondary schools. [Students should

provide themselves in advance with the Teubner text of Cicero, edited by Mueller et al. in 11 volumes, M. 22, 35.]

3 hrs., both semesters. (PEASE.)

23. Latin Composition.—Practice in expression and style, with original essays in Latin.

1 hr., both semesters. (FAIRCLOUGH.)

24. Epigraphy.—Introduction to Latin Epigraphy.

1 hr., 1st semester. (PEASE.)

25. Latin Syntax.—Problems in Latin Syntax. Open to graduates of advanced standing, by invitation.

1 hr., 2d semester. (PEASE.)

26. A Journal Club, composed of the instructors and graduate students in Latin and Greek will meet monthly for reports on articles of interest in the current periodicals and on new books that appear.

GERMANIC LANGUAGES

JULIUS GOEBEL, Ph. D., Professor of Germanic Philology and Literature.

JAMES OWEN GRIFFIN, Professor of German.

†KARL G. RENDTORFF, Ph. D., Assistant Professor of German.

HERBERT ZABRISKIE KIP, Ph. D., Assistant Professor of German.

CHARLES FREDERICK SCHMUTZLER, A. M., Assistant in German.

The aim of the elementary classes in this Department is to give the student a thorough knowledge of German grammar and to enable him to acquire facility in reading German. The more advanced classes take up the study of the poets and writers of the classical period, and it is intended to offer, by the reading and interpretation of these authors, an equivalent for the study of the ancient languages to those not taking Latin or Greek in their University course. The general responsibility for the work of the first and second years rests with Professor Griffin; that for the work in Literature and Philology, with Professor Goebel.

Students who intend to engage in preparatory teaching of German are expected to include courses 7, 8, 10, 11, 12, and 14.

† Assistant Professor RENDTORFF will be absent on leave during 1901–02.

1. Elementary.—German Grammar and German Reader; German Composition; Novelletten; translation of easy prose and poetry. Course 1 is intended for those beginning the study of the language. Four five-hour sections and one three-hour section. Students who have had training in Latin, and students who have some knowledge of German, but not sufficient to enable them to pass in entrance subject 20*a*, will be admitted to the three-hour section. *3 and 5 hrs., both semesters.*

(GRIFFIN, KIP, SCHMUTZLER.)

2a. Second-Year German.—Gœthe's Gœtz von Berlichingen and Lessing's Prosa. [In 1901-02 Schiller's Maria Stuart and Gœthe's Prosa.] Advanced grammar and composition, translation at sight. Open to students who have completed course 1 or its equivalent, or who have received credit for entrance subject 20*a*. *3 hrs., both semesters.* (GRIFFIN, RENDTORFF, KIP.)

2b. Rapid Reading.—The rapid translation of modern German prose; writing of German from dictation; paraphrasing of the German text. This course should be taken in connection with course 2*a*, which it is intended to supplement. So far as is consistent with a thorough understanding of the work the course will be conducted in German.

2 hrs., both semesters. (GRIFFIN, RENDTORFF.)

3. Scientific and Historical German.—The work in Scientific German consists of the translation of monographs by such leading German scientists as Cohn, Weismann, and Helmholtz. The work in Historical German consists of the rapid translation of modern historical and economic German. Essays published in current numbers of the Deutsche Rundschau and other leading German periodicals are studied. No student is advised to take this course who has not had at least two years of thorough preparation in literary German.

2 hrs., both semesters. (KIP.)

4. Classical German Drama.

a. Lessing's Nathan der Weise, with lectures on Lessing as a dramatist and as a social and religious reformer. [In 1901-02, Schiller's Wallenstein, with lectures on the social and political conditions of the period.] (First semester.)

b. Jungfrau von Orleans, studied in connection with the political condition of France at that period, the supernatural element, and the influence of the classics. [In 1901-02, Gœthe's Iphigenie,

interpretation and lectures in connection with Kuno Fischer's Essay on Iphigenie.] (Second semester.)

2 hrs., both semesters. (GRIFFIN.)

5. Third-Year German.—Gœthe's Hermann und Dorothea, and Lessing's Nathan der Weise. [In 1901-02, Gœthe's Iphigenie and Schiller's Wallenstein Trilogy will be studied.] During both semesters one hour of this course will be devoted to the reading of literary, scientific, and historical German prose.

3 hrs., both semesters. (RENDTORFF.)

6. Modern German Novels.—Cursory reading of standard novels by Scheffel, Freytag, Gottfried Keller, etc.

2 hrs., both semesters. (RENDTORFF.)

7. Advanced German Composition.—Translation of graded exercises covering the most important parts of German Syntax. Writing of essays in German. Open to students who have completed course 2, or its equivalent.

1 hr., both semesters. (RENDTORFF.)

8. Deutsche Syntax.—Aufsätze und Stilübungen. Open to students who have completed course 7, or its equivalent.

1 hr., both semesters. (RENDTORFF.)

9. History of German Civilization.—This course is intended for students of German who wish to become more intimately acquainted with German history and the development of German civilization. A special study will be made of the periods of the Migrations, the Crusades, the Reformation, the Thirty-years War, and the 18th and 19th Centuries in their relation to German literature. Open to all students of German.

2 hrs., both semesters. (RENDTORFF.)

10. Teachers' Course.—This course is intended for students who expect to become teachers of elementary German. Lectures and exercises. Open to advanced students only.

2 hrs., 1st semester. (GOEBEL.)

11. Goethe and Schiller.—Gœthe's Faust, First and Second Parts. Interpretation, with lectures on the development of the Faust-legend, the history of Gœthe's Faust, and its philosophical and ethical ideas. [In 1901-02 Gœthe's and Schiller's lyric and philosophical poems will be studied.]

2 hrs., both semesters. (GOEBEL.)

12. History of German Literature.—Lectures on the history of German literature from the earliest times to the Reformation. [In 1901-02, lectures on the history of German literature in the eighteenth century.]

2 hrs., both semesters. (GOEBEL.)

13. Poetics.—Lectures on the psychology and æsthetics of poetry as the basis for literary criticism. Comparative study of the principal theories of lyric, epic, and dramatic poetry from Aristotle to the present time. This course is open to all students of literature. [Not given in 1901-02.]

2 hrs., 1st semester. (GOEBEL.)

GRADUATE COURSES

The graduate courses in German, for which a thorough linguistic preparation is required, are intended especially for students who will make the teaching of German their later profession. Careful attention is given to the linguistic as well as to the literary training of the student, aiming at a comprehensive insight into the historical growth of the Germanic languages and literatures. The scientific methods of original and critical research are taught and practiced in the seminary. Such students as have given satisfactory proof of their ability as independent investigators will be admitted to the degree of Doctor of Philosophy, upon fulfilling the general requirements prescribed by the University.

Library facilities include the extensive library of the late Professor Hildebrand of Leipzig, which offers, on account of the rare completeness of the collection in all branches of Germanic philology and literature, extraordinary opportunities for graduate work in German.

14. Middle-High German.—Middle-High German Grammar, with readings from Weinhold's Lesebuch.

2 hrs., 1st semester. (GOEBEL.)

15. Nibelungenlied.—Interpretation, with lectures on the history of the Nibelungensage. [In 1901-02 Walther von der Vogelweide will be interpreted.]

2 hrs., 2d semester. (GOEBEL.)

16. Old-High German and Old Saxon.—Old-High German and Old Saxon Grammar, with readings from Braune's Lesebuch.

2 hrs., 1st semester. (GOEBEL.)

17. Heliand.—Interpretation and lectures.

2 hrs., 2d semester. (GOEBEL.)

18. Old Norse.—Old Norse Grammar, with readings of Old-Norse prose texts. (Holthausen's Lesebuch.) [Omitted in 1901-02.] *2 hrs., 1st semester.* (GOEBEL.)

19. Edda.—Interpretation of the heroic lays of the older Edda in connection with the course on the Nibelungenlied. [Course 19 will not be given in 1901-02.]
2 hrs., 2d semester. (GOEBEL.)

20. Gothic.—Gothic Grammar and interpretation of select passages from Wulfila. *2 hrs., 2d semester.* (GOEBEL.)

21. Comparative German Grammar.—Lectures on the comparative grammar of the Old-Germanic dialects.
2 hrs., 2d semester. (GOEBEL.)

22. German Seminary.—In 1900-01 the work of the Seminary consisted of the study of the æsthetic writings of Schiller. [In 1901-02 a special study will be made of the German Volkslied of the fifteenth and sixteenth centuries, and its influence on German literature during the eighteenth century.]
2 hrs., both semesters. (GOEBEL.)

ROMANIC LANGUAGES

JOHN ERNST MATZKE, Ph. D., Professor of the Romanic Languages.

OLIVER MARTIN JOHNSTON, Ph. D., Associate Professor of Romanic Languages.

PIERRE JOSEPH FREIN, Ph. D., Assistant Professor of Romanic Languages.

MARATHON MONTROSE RAMSEY, A. M., Assistant Professor of Spanish.

PETER VON LE FORT, Assistant in French.

HOMER PRICE EARLE, Assistant in Spanish.

The undergraduate courses in the Romanic Languages are planned so as to give students an intimate acquaintance with the modern forms of the languages spoken in the principal neo-latin countries. To this end systematic attention is paid to pronunciation, reading, syntax, and conversation. In the higher courses special emphasis is laid on the study of the literature of these

countries. In order to give students an opportunity to become familiar with the spoken idioms, several of the advanced courses are conducted as much as possible in the language which forms the object of study.

Students will have the opportunity of selecting either French or Spanish as their major subject. In French a minimum of twenty-eight hours will be required for graduation, consisting of courses 2, 3, 4, 5, 6, 7, and 8. In Spanish a similar requirement will be made. Courses on the History of Spanish Literature will be added later to those outlined, and the whole course will be planned particularly with reference to the needs of students looking forward to careers in Cuba, Puerto Rico, and the Philippine Islands.

1. Elementary French.—Aldrich and Foster's Foundations of French, with written exercises and systematic training in French pronunciation on the basis of Matzke's Primer of French Pronunciation; Kuhns, French Reading for Beginners; Halévy, L'Abbé Constantin; Mérimée, Colomba; Dumas, La Tulipe noire; In this course the study of the language is taken up from the beginning. Stress is laid upon the acquisition, theoretical and practical, of a correct pronunciation, but no direct attempt is made to teach French conversation. The student's entire energy is concentrated upon the attainment of a full and accurate reading knowledge of the language, to which end grammar and composition are made systematically to contribute. Open to all, but students desiring to enter after the end of the second week will be admitted only upon special examination.

3 and 5 hrs., both semesters. (JOHNSTON, FREIN, LE FORT.)

2. Modern French.—Balzac, Eugénie Grandet; Daudet, Morceaux Choisis; France, Le crime de Sylvestre Bonnard; Hugo, Hernani; Whitney's Practical French Grammar, Part II. Open to students who have completed course 1, or who have received credit for entrance subject 19*a*.

3 hrs., both semesters. (JOHNSTON, LE FORT.)

3. French Rapid Reading and Conversation.—Augier, Le Gendre de Monsieur Poirier; Rostand, Cyrano de Bergerac; Lamartine, Graziella; Sarcey, Le Siège de Paris; Bowen's Modern French Lyrics. The course will be conducted entirely in French, the texts read will be interpreted in French, and systematic instruction in French conversation will be given.

Courses 2 and 3 constitute the second year's work in French. Course 3 may be taken in connection with course 2, or subsequently to it, but it may not precede course 2.

2 hrs., both semesters. (FREIN.)

4. Classical French.—A study of the principal authors of the seventeenth century. The following texts will be read: Corneille, Le Cid, Polyeucte; Racine, Andromaque, Athalie; Molière, Les Précieuses Ridicules, Tartuffe, Le Bourgeois Gentilhomme; La Fontaine, Fables. Lectures on the development of French Literature in the seventeenth century. Open to students who have completed courses 2 and 3, or their equivalent.

3 hrs., both semesters. (JOHNSTON.)

5. History of French Literature from the Renaissance to the Romantic Movement.—Lectures in French, supplemented by reading and reports by the members of the class. Open to students who have completed courses 2 and 3, or their equivalent.

2 hrs., both semesters. (FREIN.)

6. History of French Literature in the Nineteenth Century.—Lectures, with reading of the principal authors and reports by the members of the class. Students should provide themselves with Pellissier, Le mouvement littéraire au XIX^{e} siècle. (Paris, Hachette, 1889.) Open to students who have completed courses 4 or 5. *2 hrs., both semesters.* (MATZKE.)

7. Advanced French Prose Composition.—Translation into French of selected English prose. Open to students who have completed course 2, or its equivalent.

1 hr., both semesters. (JOHNSTON.)

8. Practical Exercises in French Composition and Conversation.—The course will be conducted entirely in French. Open to students who have completed courses 2 and 3, or their equivalent. *1 hr., both semesters.* (FREIN.)

10. Elementary Spanish.—Loiseaux, An Elementary Grammar of the Spanish Language; Matzke, First Spanish Readings; Valdés, José; Tamayo y Baus, Un Drama Nuevo. Open to all.

3 hrs., both semesters. (RAMSEY, EARLE.)

11. Modern Spanish.—Ramsey, A Textbook of Modern Spanish; Alarcón, El Capitán Veneno; Galdós, Doña Perfecta; Emilia Pardo Bazán, Insolación y Moriña; Moratin, El sí de las

Niñás; Zorilla, Don Juan Tenorio. Open to students who have completed course 10, or who have received credit for entrance subject 18. *3 hrs., both semesters.*, (RAMSEY.)

12. Spanish Rapid Reading and Conversation.—Valera, Pepita Jimenez; Fernan Caballero, La Familia de Alvareda; Bretón de los Herreros, Marcela o ¿ á cual de los tres ?; Gutiérrez, El Trovador. The course will be conducted entirely in Spanish, the texts read will be interpreted in Spanish, and systematic instruction in Spanish conversation will be given.

Courses 11 and 12 constitute the second year's work in Spanish. Course 12 may be taken in connection with course 11, or subsequently to it, but it may not precede course 11.

2 hrs., both semesters. (RAMSEY.)

13. Advanced Spanish Prose Composition.—Ramsey and Lewis, Progressive Exercises in Spanish Prose Composition. Open to students who have completed course 11, or its equivalent.

1 hr., both semesters. (RAMSEY.)

14. Classical Spanish.—Cervantes, Don Quixote; Lope de Vega, La Estrella de Sevilla; Calderón, La Vida es Sueño and El Mágico Prodigioso. Open to students who have completed course 11, or its equivalent. *2 hrs., both semesters.* (RAMSEY.)

15. Elementary Italian.—Sauer, Italian Grammar; Bowen's First Italian Readings; Manzoni, I Promessi Sposi; Goldoni, Commedie Scelte; Alfieri, Oreste. Open to students who have completed French course 1, or who have received credit for entrance subject 19*a*. *3 hrs., both semesters.* (JOHNSTON.)

16. Advanced Italian.—Dante, La Divina Commedia. Open to students who have completed course 15. [Course 16 will not be given in 1901-02.]

2 hrs., both semesters. (JOHNSTON.)

GRADUATE COURSES

Courses of instruction for graduate students in Romanic philology and literature lead to the degrees of Master of Arts and Doctor of Philosophy, and are planned for the benefit of specialists, particularly of such as are looking forward to becoming college teachers of the Romanic languages. Admission to regular standing in this department presupposes an undergraduate curriculum of study which has included Latin and French, and has afforded proficiency in at least one of the principal languages

of the Romanic group (French, Spanish, or Italian). In addition to this, a good reading knowledge of German (for purposes of advanced study) is requisite. In connection with their special work, graduate students will be expected to take, under the advice of their professor, such undergraduate courses in the Romanic languages as may supplement their previous studies, and also such graduate courses in related departments as will serve to broaden their general acquaintance with philology and literature.

17. History of Old French Literature.—Lectures on the history and development of French Literature from the beginning to the end of the fifteenth century.

2 hrs., both semesters. (MATZKE.)

18. French Historical Grammar.—Lectures on Old French Phonology and Morphology. Students should provide themselves with Schwan-Behrens, Grammaire de l'Ancien Français, traduction de Bloch, (Leipzig, Reisland, 1900), Suchier, Altfranzösische Grammatik (Halle, Niemeyer, 1893), Körting, Lateinisch-Romanisches Wörterbuch (Schöningh, Paderborn, 1901). One hour every week will be given up to practical philological exercises based on Paris' edition of La Vie de Saint Alexis (Paris, Vieweg, 1885), and Suchier's edition of Aucassin et Nicolete, (Schöningh, Paderborn, 1899). *3 hrs., both semesters.* (MATZKE.)

19. Old French Texts.—Translation of Old French Texts from Bartsch-Horning, La Langue et la Littérature Française (Paris, Maisonneuve et Leclerc, 1887).

2 hrs., both semesters. (JOHNSTON.)

20. Old Spanish.—Old Spanish Grammar with readings from Gorra, Lingua e Letteratura Spagnuola delle origini (Hoepli, Milan, 1898). *2 hrs., both semesters.* (RAMSEY.)

21. History of the Spanish Theatre.—Lectures.

1 hr., both semesters. (MATZKE.)

22. Seminary.—In 1900-01 the Seminary was occupied with the study of Corneille. [In 1901-02 the work will be centered in the study of Chrétien de Troies.]

2 hrs., both semesters. (MATZKE.)

23. Journal Club.—The instructors in the department and the advanced students meet regularly on alternate Thursdays for the discussion of the periodicals and new books.

24. Teachers' Course in French.—Lectures on methods of teaching French. Study of the available text-books, and practical exercises. *3 hrs., 1st semester.* (——)

25. Phonetics.—Lectures on the organs of speech and the nature and formation of speech sounds, with practical exercises on the pronunciation of French, German, and English. Intended particularly for teachers of language.

3 hrs., 2d semester. (——)

RUSSIAN

1. Elementary Russian.—Grammar, composition, reading. *1 hr., both semesters.* (BABINE.)

2. Advanced Russian. — Selections from Russian prose writers of the nineteenth century.

1 hr., both semesters. (BABINE.)

ENGLISH

ENGLISH LITERATURE AND RHETORIC

MELVILLE BEST ANDERSON, A. M., Professor of English Literature.

HENRY BURROWES LATHROP, A. B., Professor of Rhetoric and Forensics.

ALPHONSO GERALD NEWCOMER, A. M., Associate Professor of English.

ELEANOR BROOKS PEARSON, A. B., Instructor in English.

FREDERIC HUNTINGTON BARTLETT, A. M., Instructor in English.

SAMUEL SWAYZE SEWARD, JR., A. M., Instructor in English.

LEE EMERSON BASSETT, A. B., Instructor in Elocution.

WILLIAM JONATHAN NEIDIG, A. B., Instructor in English.

The courses in English may be divided into two classes, those which have a general value in affording discipline and culture, and those which are more especially designed for professional students of language and literature. The general courses (3, 5, and 8) are open to all students, except that those electing course 8 must have passed in entrance subject 1. Conditions of admission to the other courses will be found under the separate numbers.

For graduation in English twenty-five hours of work in the department, not counting courses 3, 5, or 8, are required. Students

who make English their major subject are expected to be able before graduation to read simple prose and verse in any three of the six languages: Greek, Latin, German, French, Italian, Spanish. (The facility required to pass in entrance subjects 18, 19*a*, 20*a*, 21, 22*a*, is the standard.) They must have a general knowledge of the history of English literature, such as may be gained from course 10, and a knowledge of the main facts of the history of the English language, such as may be gained from course 1 in English Philology.

UNDERGRADUATE COURSES

1. Elocution.—A general course in the elements of interpretative reading. *5 hrs., both semesters.* (BASSETT.)

2. Vocal Training.—The use of the voice in reading and speech. Open only to students who have passed in course 1. *2 hrs., both semesters.* (BASSETT.)

3. Introduction to English Prose.—Course 3 requires a considerable amount of reading in English prose literature. It aims to train students in habits of accurate and sympathetic reading, and to acquaint them with a variety of authors. *3 hrs., 1st semester.* (BARTLETT, SEWARD.)

4. Vocal Interpretation of Literature.—Open only to students who have passed in course 2. *2 hrs., both semesters.* (BASSETT.)

5. Introduction to English Poetry.—Course 5 is meant to acquaint students with the elements of poetic form, and to help them to an intelligent interest in poetry. Open to all students. *3 hrs., 2d semester.* (BARTLETT, SEWARD.)

6. The Development of English Prose.—An advanced course, tracing the development of English prose from the middle of the sixteenth century to the middle of the nineteenth. Students must obtain the instructor's permission before registering in this course. *2 hrs., both semesters.* (PEARSON.)

7. Teachers' Course in English.—This course is intended primarily for graduates, and is open only to students who satisfy the instructors of their fitness. *2 hrs., both semesters.* (LATHROP, PEARSON.)

8. English Composition.—A course in narration, description, and exposition. Practice in taking notes and in making syllabi and abstracts forms a part of the course, the object of which is to develop habits of observation and accuracy of thought, as well as the power of expression. Open to students who have passed in entrance subject 1.

2 hrs., both semesters.

(Pearson, Bartlett, Seward.)

9. Argument. —This course includes a study of the principles of argumentation, a study of models, and exercises in the preparation and presentation of arguments. The course is of a general nature and is not confined to argument of an oratorical type. Open in general only to students who have passed in English 8 and in Philosophy 1. *2 hrs., 2d semester.* (Lathrop.)

10. The History of English Literature.—A course of lectures, giving a general view of the history of English literature. Intended primarily for advanced students of English, but open to others who may satisfy the instructors of their fitness.

2 hrs., both semesters. (Anderson, Flügel.)

11. English Composition.—An advanced course, with special reference to the principles of invention and to the philosophy of style, and their practical application to various forms of literary art. Students must obtain the instructor's permission before registering for this course.

2 hrs., both semesters. (Newcomer.)

12. Essayists of the Nineteenth Century.—A study of the modern essay in its various aspects, based upon representative selections from Macaulay, Carlyle, Emerson, Ruskin, Arnold, Lowell, Pater, Stevenson, and Huxley. Open to second-year students. *2 hrs., both semesters.* (Newcomer.)

13. Oral Debate.—This course includes practice in the preparation and delivery of oral arguments, chiefly on economic, social, political, and historical topics. It is open to a limited number of students, and except in unusual cases, only to students who have had English 9. [See History 29.]

2 hrs., both semesters. (Lathrop, Duniway.)

14. The English Novel.—English prose fiction from Bunyan

to George Eliot. Open to second-year students who satisfy the instructor of their fitness.

2 hrs., both semesters. (LATHROP.)

15. Prosody.—A study of the principles of modern English versification. Students should possess either Ward's English Poets or copies of the principal poets from Spenser to Tennyson.

2 hrs., 1st semester. (NEWCOMER.)

16. Characteristics of Shakspere.—A comprehensive survey of all the works ascribed to Shakspere, with a view to the illustration of the grounds of his literary supremacy. Open to students of all departments who have taken courses 3 and 5, or who otherwise satisfy the instructor of their fitness.

2 hrs., 1st semester. (ANDERSON.)

17. Spenser.—A critical examination of his works with a study of his life and character, of the esthetic and moral qualities of his poetry, and of his relative position in the history of literature. Open to students who have had ten hours of English. [Spenser's Works, Macmillan edition.]

2 hrs., 2d semester. (NEWCOMER.)

18. English Literature of the Eighteenth Century.—A comparative study of the literature of the Augustan period, and the early romantic revival. Open to those only who are familiar with either French or German. *a.* The age of Pope (first semester.) *b.* The age of Johnson (second semester.)

3 hrs., both semesters. (HUDSON, LATHROP.)

19. Representative English Poets of the Nineteenth Century.—*a.* Keats, D. G. Rossetti, Matthew Arnold, Swinburne, William Morris (first semester). *b.* Tennyson (second semester).

3 hrs., both semesters. (HUDSON, NEWCOMER.)

20. Thesis.—In certain courses, students will be given an additional hour of credit on presentation of a satisfactory thesis embodying the result of independent work. Permission to register for thesis work must be obtained in each case from the major professor. *1 hr., either semester.*

21. American Literature.—A survey of American literary history, and the reading and discussion of notable works in prose and verse. Students in this course are expected to possess the

works of the chief American poets, especially Bryant, Poe, Longfellow, Whittier, Emerson, Lowell, Whitman, and Lanier. Open only to students who have taken courses 3, 5, and 8, or their equivalent. *3 hrs., both semesters.*

24. Wordsworth and His Contemporaries.—This course is intended to cultivate a catholic appreciation of the poetry of Wordsworth, Shelley, and Byron. Many of the more notable works of these poets are read; their biographies are studied for light upon their art and thought; and the great social and literary movement which they exemplify and interpret is discussed. Open to the more advanced undergraduate students of all departments. [Macmillan's Globe editions of Wordsworth and Shelley.]
2 hrs., 1st semester. (ANDERSON.)

25. Browning.—The Ring and the Book. This course is in some sense a continuation of course 24, and is open to the same class of students. The Riverside edition of Browning.
2 hrs., 2d semester. (ANDERSON.)

26. Milton.—Paradise Lost; Paradise Regained; Samson Agonistes. [Masson's smaller edition of Milton's poems (3 vols.), either Pattison's or Garnett's or Stopford Brooke's account of Milton's life and works, and Verity's annotated texts (Cambridge Press).] *3 hrs., 1st semester.* (ANDERSON.)

27. Shakspere.—A study of some eight of the plays, so selected as to illustrate the author's range and the variations of his art in the successive periods of his life. The selection of plays is changed from year to year and credit is allowed for one, two, or more semesters, according to the amount of time the student cares to give to the work. This course is intended primarily for the more advanced students in the English Department, but is open to others who may satisfy the instructor of their fitness. [Dowden's Primer of Shakspere, the Temple edition of the several plays, and at least one volume of Furness's Variorum edition.] *3 hrs., 2d semester.* (ANDERSON.)

GRADUATE COURSE

28. Seminary.—In 1899, a course was begun in the earlier dramas attributed to Shakspere and in the dramas of his immediate predecessors. The fall semester, 1900, was devoted to Beaumont and Fletcher; the winter semester, 1901, to Dekker, Chapman, Webster, and others. It is proposed to continue this course

and to devote the fall semester, 1901, to Ben Jonson. Open to graduate students of English and to such undergraduates as may be invited by the professor.

3 hrs., both semesters. (ANDERSON.)

For a general announcement touching graduate courses in English, see English Philology, *infra.*

ENGLISH PHILOLOGY

EWALD FLÜGEL, Ph. D., Professor of English Philology.

EDWARD PLAYFAIR ANDERSON, Ph. D., Assistant Professor of English Philology.

UNDERGRADUATE COURSES

1. Anglo-Saxon.—*a.* Anglo-Saxon Grammar and translation of select passages in prose (first semester). *b.* Translation of select passages in prose and verse. Outline of Historical English Grammar (second semester).

3 hrs., both semesters. (E. P. ANDERSON.)

2. Chaucer.—This course is an elementary one, and includes an outline of Middle English Grammar for the beginner. Students having completed this course will be admitted in the second semester to the advanced course in Chaucer. Open to third year students. *2 hrs., both semesters.* (FLÜGEL, E. P. ANDERSON.)

3. History of Early English Literature.—Given as the first semester's work of course 10 in English Literature and Rhetoric. *2 hrs., 1st semester.* (FLÜGEL.)

ADVANCED COURSES

Primarily intended for graduate students, but open to more advanced undergraduates who satisfy the instructor of their fitness.

In connection with the following courses, opportunity will be afforded to graduate students to pursue lines of reading and investigation under the guidance of the professors. The courses offered lead to the Doctor's degree, but the specific requirements for the degree must vary with every individual. In no case will the degree be conferred except upon the completion of a thesis embodying the results of original work of a high order. More definite information will be furnished to intending students who write giving the necessary information respecting their purposes and equipment.

4. Chaucer (Advanced Course).—Introduction to the study of Chaucer MSS. Interpretation of the Prologue to the Canterbury Tales, alternating with an interpretation of some of the minor poems and lectures on the History of Chaucer Criticism. *2 hrs., 2d semester.* (FLÜGEL.)

5. Beowulf.—[Not to be given in 1901-02.] *2 hrs., 1st semester.* (FLÜGEL.)

6. English Palæography.—Lectures and Exercises. [Not to be given in 1901-02.] *1 hr., 2d semester.* (FLÜGEL.)

7. English Ballads.—Lectures on the History of English Popular Poetry from the Earliest Times to the Eighteenth Century. *1 hr., both semesters.* (FLÜGEL.)

8. History of English Prose Literature.—From Malory to Tindale, including a History of the English Bible. [Not to be given in 1901-02.] *1 hr., both semesters.* (FLÜGEL.)

9. Anglo-Saxon Exercises.—Cynewulf's Crist. [Not to be given in 1901-02.] *2 hrs., 2d semester.* (FLÜGEL.)

10. Historical English Grammar.—Lectures. *2 to 4 hrs., both semesters.* (FLÜGEL.)

11. Middle English Exercises.—[Not to be given in 1901-02.] *2 hrs., 1st semester.* (FLÜGEL.)

12. English Philological Club.—Papers and discussions by members of the Department on special subjects. In 1901-02 the subjects will be chosen from the Methodology of English Philology, and the papers will deal with the History of English Lexicography, the Histories of English Literature, the History of Critical Terms. (FLÜGEL, E. P. ANDERSON.)

PHILOSOPHY

ARTHUR ONCKEN LOVEJOY, A. M., Associate Professor of Philosophy.

CHARLES HENRY RIEBER, A. M., Assistant Professor of Logic.

EDWARD LAMBE PARSONS, A. B., Instructor in Philosophy.

CHARLES REYNOLDS BROWN, A. M., Lecturer in Ethics.

[Courses 8-10 may be taken only after consultation with the instructors. The announcement of additional courses may be expected at the beginning of the year 1901-02.]

1. Elementary Logic. —Textbook, lectures, and recitations.
2 hrs., 1st semester. (RIEBER.)

2. Logic of the Sciences.—The inductive methods, their nature, scope and degree of validity; the presuppositions and general methodology of scientific hypothesis and verification; logical differences in the procedure of the several types of sciences. [Open to students who have taken course 1, and intended to be complementary to that course, for students in the natural sciences and in economics.]
2 hrs., 2d semester. (RIEBER.)

3. Introduction to Philosophy. —General introduction to the problems of Philosophy. Lectures, recitations, and selected reading. *2 hrs., 2d semester.* (PARSONS.)

4. History of European Philosophy. —From the Ionian schools to the present century. Text-book, lectures, and required reading. *2 hrs., both semesters.* (LOVEJOY.)

5. Historical Ethics. —Origin and development of the moral consciousness, as regards both its form and its content; moral ideas of early societies; history of the chief ethical theories since the beginnings of systematic moral reflection in Greece.
3 hrs., 1st semester. (LOVEJOY.)

6. Systematic Ethics. —The main contemporary problems of ethics; current theories analyzed and criticized, with an attempt at reconstruction. [Not to be given in 1901-02.]
3 hrs., 1st semester. (LOVEJOY.)

7. Philosophy of Religion.

(*a*) *Nature of religion* as a subjective phenomenon, and the laws of its development, in the light of a study of the conceptions of primitive races and of the outlines of the religious history of the Greeks, Hindus, and Hebrews.
2 hrs., 2d semester. (LOVEJOY.)

(*b*) *Theism.*—An examination of the diverse conceptions of deity which have been historically influential, and an analysis and estimate of the principal historic arguments for theism.
2 hrs., 2d semester. (PARSONS.)

8. English and French Philosophy of the Enlightenment.—Development of philosophical conceptions from Locke to the period of the French Revolution; the deistic movement; relations between English and French thought during the period.
2 hrs., 2d semester. (LOVEJOY.)

9. German Philosophy since Kant.—Brief sketch of Kant's doctrine, and study of its development in the idealistic systems and in Schopenhauer.

2 hrs., 1st semester. (PARSONS.)

10. Seminary.—A critical study of the four more influential types of contemporary systematic philosophy, in the writings of their principal exponents: evolutionary realism (Spencer), abstract monism (Devssen), idealistic monism (Bradley, Royce), monadism (Renouvier).

2 hrs., both semesters. (LOVEJOY.)

11. The Ethics of Christ.—The aim of this course is threefold: to study the conduct and teaching of Christ as an exponent of morals; to interpret his words according to correct literary methods; and to apply the principles he inculcated to our present life. The materials for this study are the Four Gospels, and the consideration of those concrete human relations upon which their contents bear. The purpose throughout is to interpret all the higher human values in the light of Christian ideals with the aim of ascertaining a rational basis for right conduct, and of affording a moral dynamic for the performance of duty.

1 hr., 2d semester. (C. R. BROWN.)

12. The Life and Literature of the Earlier Hebrews.—A study of the historical, poetical, didactic, and prophetic books of the Old Testament according to modern literary methods. The aim is to acquaint the student more thoroughly with the contents of this literature and to aid him in the useful interpretation of its real meaning and value.

The life of the Hebrew people will be studied so far as material is available, from patriarchal times down to the revolt of the Maccabees, together with the literature of the various periods. The limits of the course will not permit the discussion of technical questions of analysis, but students will be instructed in the methods of modern Biblical study and in the results of recent scholarship in determining the processes which entered into the composition of this literature. The bearing of these results on the moral and religious life of our own time will naturally be considered. The instruction given in the course of lectures will be supplemented by a certain amount of suggested reading and of original investigation to be done by each student. [Course 12 alternates with course 11, and will be given in 1901-02.]

1 hr., 2d semester. (C. R. BROWN.)

PSYCHOLOGY

FRANK ANGELL, Ph. D., Professor of Psychology.
LILLIE JANE MARTIN, A. B., Assistant Professor of Psychology.

1. General Psychology.—Not open to first year students. *3 hrs., both semesters.* (ANGELL.)

2. Beginner's Laboratory Work.—In connection with course 1. *1 or 2 hrs., both semesters.* (ANGELL, MARTIN.)

3. Psychological Optics.—Open to those who have completed course 1 or its equivalent.
2 hrs., both semesters. (ANGELL.)

4. Advanced Laboratory Work in Psychology.
3 hrs., both semesters. (ANGELL, MARTIN.)

5. Psychology of the Feelings, with special reference to æsthetics. *2 hrs., 1st semester.* (MARTIN.)

6. Applied Psychology, with special reference to the social relations. *2 hrs., 2d semester.* (MARTIN.)

7. Reading of German Psychology. (No credit.)
1 hr., both semesters.

EDUCATION

*ELLWOOD P. CUBBERLEY, A. B., Associate Professor of Education.
EDWIN DILLER STARBUCK, Ph. D., Assistant Professor of Education.
DAVID SAMUEL SNEDDEN, A. B., Instructor in Education.
JOHN T. MCMANIS, A. B., Assistant in Education.
FRANK ERNEST THOMPSON, Assistant in Education.

The courses in this Department have been arranged to meet the needs of three classes of students: first, those who desire to take some work in Education as part of a liberal training, without intending to use the knowledge in teaching; second, those who wish to prepare for recommendation for the Teacher's Certificates, by taking such work in Education as the requirements of their course will permit; and third, students whose major subject is Education.

*Associate Professor CUBBERLEY will be absent on leave during 1901-02. His courses will be omitted during his absence, with the exception of course 1, which will be given by MR. SNEDDEN.

To the first class of students, courses 1, 2, 3, 4, 6 or 7, 11, and 12 are particularly recommended. These are general courses, of value to students without regard to the question of teaching.

The second class of students should begin with course 1, and follow this by such additional training as can be arranged for. Those preparing for the Ordinary Form of the Teachers' Recommendation will find the work most profitable if they begin their preparation with the Sophomore year, and take a small number of hours each semester during the remaining three years. Courses 6, 7, 8, and 10 will be found particularly valuable, though courses 8 and 10 should be preceded by at least two courses in the department. Course 5 should be taken by those preparing to teach special subjects in secondary schools. Not more than one historical course may be included in the first twelve hours.

The first twelve hours of work in Education should be selected from courses 1 to 13 inclusive. Additional work may be taken in any course which the student is prepared to enter. Some course in Education should always be reserved for the last year. No student will be credited, in any one semester, with more than seven hours toward the Ordinary Form or more than four hours toward the Higher Form of Recommendation. Previous to the Junior year not more than six hours will be credited toward the Recommendation. All candidates for the Higher Form of Recommendation should consult the head of the department before arranging their work in Education.

The third class of students, those whose major subject is Education, are permitted to select, subject to the approval of the head of the department, any courses which they are prepared to enter. For graduation with Education as the major subject, students are expected to complete a minimum of twenty-eight hours of work in the department, including thesis training. Of this amount course 1 (unless the requirement is waived), course 2 or 3, and course 6 or 7, should form a part. Major students who have never taught will be expected to register for courses 8 and 10 in addition to the twenty-eight hours. In addition to this requirement of hours in the department, major students will also be expected to take, as collateral work, Psychology 1 and 2 and one of the biological courses (Physiology 1, or Zoology 1).

Major students are encouraged to carry the collateral subjects further than is required, to carry, as a minor, sufficient work in some other department to be recommended to teach the subject in the schools of the State, and to make the beginnings of a reading

knowledge of German and French. The work in the minor subject will be particularly valuable as a background for the work in educational theory and practice. Ability to read either German or French will be required of all candidates for the Master's degree.

Teachers not candidates for a degree, but wishing to carry on special work in the department, will be admitted to the courses on the same basis as regular students. Special lines of investigation will be outlined for graduate students who are prepared to do advanced work.

COURSES INTENDED PRIMARILY FOR UNDERGRADUATES AND FOR CANDIDATES FOR THE TEACHER'S CERTIFICATE.

1. Introduction to Educational Theories and Practices.—Lectures and assigned readings. A discussion of fundamental pedagogical principles and their application to the work of teaching. The course will include such topics as the work and preparation of the teacher, meaning and aim of public education, the social, biological, and psychological aspects of education, conduct of a recitation, courses of instruction in elementary and secondary schools, relative values, present tendencies in public education, and the California system of public schools. This is an introductory course, and should precede the other courses in the department. Open to second year students, and to first year students who have had experience in teaching or whose major subject is Education. [During 1901-02 this course will be given by Mr. SNEDDEN.]

3 hrs., both semesters. (CUBBERLEY, SNEDDEN.)

2. History of Education in Europe.—Lectures, assigned readings, and class reports. A study of the development of educational systems and ideals from the time of the Hebrews to the present, and of the close connection existing between the history of education and the social and political forces which have operated in the evolution of the various historic ideals and schools. Particular emphasis is placed on the development of educational ideas and systems since the Reformation. Open to second year students, and to first year students who have had experience in teaching. [This course alternates with course 3. Course 2 was given in 1900-01, but will be omitted in 1901-02.]

2 hrs., both semesters. (CUBBERLEY.)

3. History of Education in America.—Lectures, assigned readings, and class reports. A study of the evolution of public school systems in the United States. Beginning with the colonial and revolutionary periods, the course will follow the

development of a few typical State and city systems, the extension of supervision, growth of secondary and higher education, and the gradual change in the means and purpose of public education. Present problems and tendencies in American education will be studied in the light of their development. Open to second year students, and to first year students who have had experience in teaching. [This course alternates with course 2, and will not be given in 1901-02.] *2 hrs., both semesters.* (CUBBERLEY.)

4. Education and Society.—A study of the tendencies of society to consciously improve itself by means of education. The function of the school as related to the home, church, and other educational institutions and agencies of the community. Special phases of education in large cities and rural communities, and special problems in connection with social education, as relating to defective and criminal classes, foreigners, negroes, etc.,
3 hrs., 1st semester. (SNEDDEN.)

5. Secondary Schools.—A study of the work of the American secondary school in its various aspects, as preparatory, culture, commercial, manual training, and industrial; the purpose, value, and limitations of the various subjects of study; flexibility versus rigidity; the work of teachers and principal; and the administration of secondary education. Intended primarily for students who are preparing to become teachers in high schools.
3 hrs., 2d semester. (SNEDDEN.)

6. Educational Psychology.—The problems of education and the practice of teaching will be viewed in the light of the well-established laws of experimental psychology and the physiology of the nervous system. The finer anatomy of the nervous system, the psychology of habit, memory, association, imagination, the senses, attention, apperception, instinct, the emotions, and fatigue will be focused on educational theory and practice. [This course alternates with course 7, and will not be given in 1901-02.]
3 hrs., both semesters. (STARBUCK.)

7. Child Study.—The aim of this course is to put students in line with the results of the study of childhood and youth. It will call out and emphasize those aspects of the subject which seem sound from a scientific standpoint, and those which are especially significant in their bearing on the work of teaching. The course will begin with the history of child study and a criticism of its methods. The work will center around the lines

of growth of the various powers and functions of children; individual and sex differences; the determination of standards of proficiency; the psychological epochs in growth; and the suggestions of child study in shaping the curriculum, indicating methods of instruction, etc. [This course alternates with course 6, and will be given in 1901-02.]

3 hrs., both semesters. (STARBUCK.)

8. Observation of Teaching. —One meeting per week for the discussion of lesson plans, and the results of the observation of teaching, under the instructor, in the elementary and secondary schools of the vicinity. This course presupposes at least course 1, and is open to students only on permission of the instructor.

1 or 2 hrs., either semester. (SNEDDEN.)

10. General Method. —A critical examination of the principles underlying methods of teaching. Critical study of texts, reports on the observation of teaching, discussion, etc. Open only to experienced teachers and to students taking course 8. [This course will be given in 1902-03, and each year thereafter.]

2 hrs., both semesters. (SNEDDEN.)

11. Genetic Psychology.—In this course an attempt will be made to get some light on the biological nature of the child. A study will be made of the beginnings of human consciousness and intelligence in the race and in the individual. Heredity and environment in their bearing on the child's mental development will be especially treated. Liberal use will be made of the materials afforded in the minds of lower animals, lower peoples, young children, defectives and delinquents. The problems of education and the practice of teaching will be discussed from this standpoint, and an analysis made of the effects of educational methods on physical and psychic growth. This course presupposes some preparation in psychology and biology, the equivalent of Psychology 1 or Education 6, and of Physiology 1 (or Zoology 1) and the course in Nature Study.

3 hrs., both semesters. (THOMPSON.)

12. Moral Education.—A discussion of the means of developing the moral life through the materials available in the common schools. The practical observations are the outgrowth of a study of the elements that enter into morality and the laws of its development in the race and in the individual. The course will consider the evolution of the instincts and the relation of these to moral conduct; the beginnings of morality; its development in

children and the changes in its characteristics with age; the training best adapted to each age; the psychoses underlying moral defects; and the part the teacher can play in awakening and shaping the moral sensibility. [This course alternates with course 13, and will be given in 1901-02.]

2 hrs., both semesters. (STARBUCK.)

13. Pestalozzi, Herbart, and Froebel.—This course is partially historical, giving a sketch of the educational tendencies these men represent. Their influence on later and recent educational theory will be traced. The course will include a discussion of kindergarten instruction, and a criticism of its methods from the standpoint of recent tendencies in education and the results of studies in psychology and child study. [This course alternates with course 12, and will not be given in 1901-02.]

2 hrs., both semesters. (STARBUCK.)

COURSES INTENDED FOR PROPERLY QUALIFIED SENIORS AND GRADUATE STUDENTS.

16. Applied Physiology and Psycho-Physics.—A presentation of such methods as superintendents, principals, and teachers can and should employ in order to gain a somewhat accurate understanding of children's capacities and needs, and, consequently, to direct their training intelligently and effectively. Tests will be given for determining the importance of the various sense organs; what each contributes in the individual child in the formation of judgments; the quickness and accuracy of the various mental functions; the variations in any child from the normal type; and the possibility of overcoming certain defects. The work will consist of two hours of lectures with demonstrations, and one period of laboratory work. The laboratory period will be spent in gaining proficiency in the methods of experimentation and in constructing and testing some of the simpler pieces of apparatus. [This course is the same as course 10 in the Department of Hygiene and Organic Training.]

3 hrs., 2d semester. (STARBUCK, SNOW.)

19. State and County School Supervision.—Lectures, assigned readings, and class reports. The organization and administration of education in the United States and in a number of typical States, centralized and de-centralized types, the rural school problem, teachers, courses of study, text-books, school funds, duties of State and County Superintendents, etc. Intended

primarily for advanced major students who wish to prepare for work as principals or superintendents, and open to others of sufficient preparation. Students should consult the instructor before registering for this course. [This course will not be given in 1901-02.] *2 hrs., 1st semester.* (CUBBERLEY.)

20. City School Supervision.—Lectures, assigned readings, and class reports. The organization and administration of public schools in cities, with particular reference to plans of organization, educational and business management, work of superintendent and principals, the teaching force, grading and promotion, courses of study, the parts of the school system and their relation to one another, and the relation of the school to the other educational forces of the community. Intended primarily for advanced major students who wish to prepare for work as principals or superintendents, and open to others of sufficient preparation. Students should consult the instructor before registering for this course. [This course will not be given in 1901-02.]
2 hrs., 2d semester. (CUBBERLEY.)

21. School Law.—The development and present status of school law in a few typical states, the tendencies in school legislation, and the educational principles upon which school legislation should be based. A study will be made of a number of illustrative cases. Intended primarily for advanced major students who are preparing for work as principals and superintendents, and open to others of sufficient preparation. Students should consult the instructor before registering for this course. [This course alternates with course 22, and will not be given in 1901-02.]
2 hrs., both semesters. (CUBBERLEY.)

22. Statistics of Education.—An interpretation of some of the more important statistics relating to the condition and progress of public and private education. A few lectures and demonstrations, and much laboratory work, involving the handling, charting, and interpretation of statistics. Open to a small number of advanced students. Students should consult the instructor before registering for this course. [This course alternates with course 21, and will not be given in 1901-02.]
2 hrs., both semesters. (CUBBERLEY.)

25. Thesis Work.—In connection with each of the courses in Education, unless otherwise announced, students will be permitted to register for an additional hour each semester, and this

amount of credit will be given upon the presentation of a satisfactory thesis, embodying the results of independent work in the investigation of some assigned topic. This work is intended primarily to drill students in the methods of independent investigation. Each major student, unless excused, is expected to register for thesis work each semester. Beginning with 1901-02 a limited number of students from other departments will be permitted to register for thesis work in Education, though the consent of the instructor, in connection with whose course the thesis is to be done, must be obtained before registering. A student taking two or more courses in the department at one time may select the course in connection with which he wishes to take his thesis. Credit for thesis work will not be accepted as part of the twelve hours required for the Teacher's Certificate. All thesis students will report to Mr. THOMPSON for direction during the early part of the work. *1 hr., either semester.*

26. Journal Club.—The instructors and advanced students of the department will meet once each month to hear reports on articles of interest in the current periodicals and on new books.

28. Seminary in the Psychology of Childhood.—Researches by experimental methods on the growth of children. The topic for 1901-02 will be a study of the line of growth and nascent periods of the different senses and mental activities. Open only to advanced students.

3 hrs., both semesters. (STARBUCK, THOMPSON.)

29. Seminary in the Psychology and Pedagogy of Religion.—Research work in the genetic aspect of morals and religion. The topics studied refer to the beginning in individual consciousness of the elements of the moral and religious instinct and their order of sequence from childhood to maturity. Reference is made constantly to the sociological development of religion, and to the practical significance of the laws discovered. During the year 1901-02 the work will center about two topics: the beginnings of the moral sense, and the growth of the conception of God. Open only to advanced students, and will not be accepted as major work.

3 hrs., both semesters. (STARBUCK.)

COURSES IN OTHER DEPARTMENTS

The following courses in other departments are accepted, to the extent of four hours, in satisfying the requirements of the Department of Education.

1. General Courses

Either of these courses may be offered by any student as satisfying in part the requirements of the department.

a. School Hygiene. —[See course 4 in the Department of Hygiene and Organic Training.]

2 hrs., 1st semester. (Wood.)

b. Nature Study.—A course of practical work in nature study for students who expect to teach the subject in the public schools. Students must receive the permission of the instructors to register for this course. One two-hour lecture and demonstration period weekly. [Given by Professor Jenkins, of the Department of Physiology, and Professor Kellogg, of the Department of Zoology.] *1 hr., both semesters.*

2. Special Courses

These courses may be offered only by major students in the department concerned, or by students who are making the work of the department a minor, with a view to being recommended as qualified to teach the subject. Each of these courses presuppose from ten to twenty hours of work in the department concerned, and should not be taken before the senior year.

c. Teachers' Course in Latin.—[See course 13 in the Department of Latin.] (This course is offered in alternate years, and will not be given in 1901-02.)

2 hrs., 2d semester. (Pease.)

d. Teachers' Course in German.—See course 10 in Germanic Languages.]

2 hrs., 1st semester. (Goebel.)

e. Teachers' Course in English.—[See course 7 in the Department of English.]

2 hrs., both semesters. (Lathrop, Pearson.)

f. Methods of Studying and Teaching History.—[See course 21 in the Department of History.]

2 hrs., both semesters. (Eaves.)

g. Teachers' Course in Elementary Physics.—[See course *c* in the Department of Physics.]

1 hr., both semesters. (Sanford.)

RECOMMENDATIONS FOR TEACHERS' CERTIFICATES

Under the ruling of the State Board of Education, in accordance with sections 1775 and 1792 of the Political Code of California, graduates of this University who are recommended by the Faculty as having had "academic and professional training equivalent to that required by the University of California," may receive certificates to teach in the public schools of this State without examination. Two forms of this recommendation will be granted, the Ordinary Form, and the Higher Recommendation.

I. The Ordinary Form

This will be granted on the following conditions:

a. Special Knowledge.—The candidate must be the holder of a baccalaureate or a higher degree from some department of this University.

b. Professional Knowledge.—The candidate must have completed at least twelve hours of work in the department of Education, in courses approved by the department.

All candidates for the Ordinary Form of Recommendation should file with the Registrar, at least one month before graduation, and on blanks provided for the purpose, a statement of the work upon which the application is based .

II. The Higher Recommendation

By joint agreement with the University of California, this higher form of recommendation has been established to encourage graduates of this and other universities to make additional and special preparation for the higher positions in the profession of teaching. It is intended for those preparing to become teachers of special subjects in high schools, normal schools, academies, and colleges, and for those preparing to become principals and superintendents of schools. It will be granted on the following conditions:

a. The candidate must hold a Master's degree from some department of this University, involving the satisfaction of all department requirements as to thesis and major and minor subjects.

b. The candidate must be recommended by the heads of the departments in charge of the major and minor subjects as qualified, in their judgment, to teach such subjects in normal schools or in the larger high schools of the State.

c. The candidate must have completed at least six hours of work in the department of Education, in addition to all requirements for the Ordinary Form of Recommendation. The additional six hours must be done in the graduate status, and in courses approved by the department, though the courses taken need not be graduate courses. Candidates whose major subject is Education are subject to the requirements of (*a*).

d. Each candidate must give satisfactory evidence of good attainments in English, especially in oral and written expression, and of ability to read either German or French.

e. In addition to the above, each candiate for this form of recommendation must offer evidence of superior attainments in the practice of teaching. This requirement will be met by teaching with marked success for a period of at least two years after the other requirements have been satisfied, or between the beginning and completion of the graduate work, or between the completion of the baccalaureate and the beginning of the graduate work. All teaching offered in satisfaction of this requirement must be approved by the professors in charge of the major and minor subjects, and by the Committee on Teachers' Bureau and Teachers' Certificates.

f. All candidates for the Higher Form of Recommendation must file with the Registrar, at least one semester before the time proposed for the completion of the work, and on blanks provided for the purpose, a detailed schedule of the studies on which such candidacy is based. This schedule must bear the signatures of the professors in charge of the major and minor subjects and of the head of the department of Education.

TEACHERS' BUREAU OF INFORMATION

The Teachers' Bureau of Information, under the direction of the Department of Education, has for its purpose:—

1. To keep a record of Stanford graduates who wish to teach, to gather information as to their knowledge and ability, and to recommend for vacancies those who seem most likely to succeed;

2. To keep a similar record of alumni who wish to be transferred to other positions;

3. To assist Boards of Education and Boards of School Trustees in securing teachers, and to co-operate with Teachers' Agencies in placing graduates of the University.

No position is assured to any student. The Bureau reserves the right to refuse to recommend students enrolled. General letters of

recommendation are not given to students. Information obtained from professors and others is regarded as confidential. No charge is made for any service rendered. Blanks for registration will be furnished on application.

HISTORY *

————————, Professor of History.

Arley Barthlow Show, A. M., Professor of European History.

Clyde Augustus Duniway, Ph. D., Associate Professor of History.

Gaillard Thomas Lapsley, Ph. D., Acting Assistant Professor of History.

Lucile Eaves, A. B., Instructor in History.

Blanche Josephine Anderson, A. M., Instructor in Ancient History.

Joseph Parker Warren, A. M., Instructor in History.

1. Constitutional and Political History of Greece.—This course is designed to afford a careful study of the evolution of Greek forms of government and Greek political ideas from the earliest times, through their expression in the great historical epochs, to the period of the supremacy of Rome, 146 B. C. Literature, art, and social institutions are considered in their relation to this central theme. The course is intended to afford a general training in scientific method and in the systematic use of books. Class work consists of lectures by the instructor, written exercises, and discussion of special points by the class. All students in the course having history for the major subject are expected to register for course 20.

3 hrs., both semesters. (B. J. Anderson.)

2. History of Rome.—From the earliest times to the end of the middle empire (A. D. 284). This course is designed to afford a study of the social and political institutions of Rome with special emphasis upon her development of political organization and of legal procedure. Like course 1, it is intended to afford training in scientific method and in the systematic use of books. Course 2 is open to all students. It is, however, intended to follow course 1 and should, when practicable, be preceded by that course. *3 hrs., both semesters.* (B. J. Anderson.)

*The work of the Department of History is being reorganized. This list of courses, showing the work now being carried on and that to be provided for, is necessarily an incomplete statement.

3. Early Mediæval Institutions. —Open to all who have taken courses 1 or 2, or an equivalent. Course 3 covers the period from the fourth to the tenth century (A. D. 284-888), ending with the overthrow of the Carolingian monarchy. Beginning with the organization of the later Roman Empire, it traces the main development of primitive Germanic institutions, the rise of the mediæval church, the expansion of the Frankish Empire, the beginning of feudalism, and the foundation of the great mediæval states. Ability to use German and French books, though not required, is of great service in this course.

3 hrs., both semesters. (SHOW.)

4. History of Europe in the Nineteenth Century.—This course deals primarily with the social and political development of Europe, but includes also the study of the commercial and colonial expansion, and of the international questions involved.

3 hrs., both semesters. (———.)

5. Church and State in the Middle Ages.—Course 5 is open to graduates and undergraduates who have taken course 3 or its equivalent. It considers the relations of the early church to the pagan and Christian empires, the rise of the papacy, the foundation of the temporal power, the theory of the Holy Roman Empire, the conflicts of the church and the civil power, and similar topics. After the ninth century, special stress is laid on the relations of the papacy to the German Empire. Students are guided in research work on selected topics. [Omitted in 1901-02.]

2 hrs., both semesters. (SHOW.)

6a. History of the Italian Renaissance.—After a brief consideration of the characteristic forms of mediæval thought and culture, the course will be devoted to a detailed study of the Renaissance in Italy. Among the principal subjects of investigation will be the political conditions in Italy in the fourteenth and fifteenth centuries, the revival of learning, and the development of the new humanism in its relations to the political, intellectual, social, and religious life of the later middle ages. Incidental attention will be given to the art and literature of the period, as embodiments of Renaissance ideals. It is not in any sense, however, a course in art history. Course 6*a* is open to graduates and to third and fourth year undergraduates.

2 hrs., both semesters. (SHOW.)

6b. Seminary in Renaissance History.—In connection with course 6*a* a limited number of students will be guided in special researches in Renaissance history. The work of the seminary will be primarily to study the spirit of humanism as manifested in some of its leading exponents. To this end, as far as practicable, the lives and works of representative men of the age will be examined, such as Petrarch, Boccaccio, Machiavelli, Erasmus, Nicholas V, Leo X, Lorenzo de Medici, Savonarola, Raphael, Michel Angelo. This seminary will be open to students taking course 6*a* who are able to make practical use of German and French books, or to others showing the like necessary preparation. [Omitted in 1901-02.] *2 hrs., both semesters.* (SHOW.)

7. American Colonial History.—Course 7 is open to graduates, and to undergraduates who have had either course 1 or course 13 or an equivalent. It should precede course 8 as an introductory course. The expansion of Europe in American exploration, commerce, and settlement, receives systematic treatment. Special attention is given to the constitutional development of the English colonies.

2 hrs., both semesters. (DUNIWAY.)

8. Constitutional and Political History of the American Revolution, 1760 - 1789.—Course 8 is open to graduates and to undergraduates who have had courses 1 and 2 or their equivalent. It should, when practicable, be preceded by course 7. It is a study of the Revolution, the Critical Period, and the formation of the national constitution.

3 hrs, 1st semester. (———.)

8a. Constitutional and Political History of the United States to 1828.—Course 8*a* is open to students who have had course 8 or its equivalent. It is a study of the development of the national constitution prior to the election of Jackson.

3 hrs., 2d semester. (WARREN.)

9. Constitutional History of England, to the Norman Conquest.—Open to graduates and advanced undergraduates. It will be found useful, in connection with course 9*a*, by those who intend to study law. *2 hrs., 1st semester.*

9a. Constitutional History of England, from the Norman Conquest to the end of the Middle Ages.—Open to graduates and advanced undergraduates, especially to such as have had

course 9. This course deals with English institutions in their formative period. Students are expected to have a fair knowledge of the political history of the time. This course, in connection with course 9, will be found useful by those who intend to study law. *2 hrs., 2d semester.* (LAPSLEY.)

10. History of the English Constitution Since Henry VII.—Open to graduates and to advanced undergraduates. This course is designed to afford a detailed study of the growth of the English Parliament and the Cabinet system. Particular attention is given to the constitutional results of the Puritan Revolution and to the existing forms of local government and administration. *2 hrs., both semesters.* (———.)

11. The French Revolution.—With special reference to its causes and its constitutional experiments. Open to students having a fair knowledge of general European history. *2 hrs., both semesters.* (———.)

13. History of England, 1485-1689.—The aim is to trace political and social development. Course 13 is open to all students, but is especially adapted for a first year course. *3 hrs., 1st semester.* (———.)

13a. History of England Since 1689.—The internal political history of the country is traced. Attention is also given to industrial and colonial expansion, and thus the subject is studied in its European and American relations. This course is open to all students, but is specially designed for those who have taken course 13. *3 hrs., 2d semester.* (WARREN.)

14. History of the Protestant Reformation.—This course begins with the study of the fundamental principles of the Reformation, especially as seen in Luther, Zwingli, and Calvin. The origin, principles, and growth of the various sects within Protestantism are traced. Special attention is paid to the Counter-Reformation, including the Council of Trent, the Jesuits, the Inquisition, and the Index. The economic and intellectual relations of the Protestant movement and the political and religious struggles growing out of it are traced to the close of the Thirty Years' War. *3 hrs., both semesters.* (———.)

15. Constitutional and Political History of the United States Since 1828.—Course 15 is open to graduates, and to undergraduates who have had courses 7, 8, and 8*a*, or their equiv-

alent. It is a study of the later phases of the slavery struggle, territorial growth, secession, the rebellion, reconstruction, and national problems since the war.

3 hrs., both semesters. (DUNIWAY.)

16. Diplomatic History of the United States.—Open to students who have had at least one course in modern history. This course will afford a systematic treatment of important topics in the foreign relations of the United States since 1775 . [Omitted in 1901-02.] *2 hrs., both semesters.* (DUNIWAY.)

17. International Law.—Open to students having a fair knowledge of modern history. This course will develop: (1) a statement of the general principles of international law to be derived from leading modern cases; (2) an outline of the history of the subject; (3) some treatment of the history of diplomacy and treaties. *2 hrs., both semesters.* (DUNIWAY.)

18. Development of Political Theories in the Seventeenth and Eighteenth Centuries.—After a consideration of the differences between the mediæval and the modern state and of the point of view of mediæval writers on politics, a survey will be made of the ideas of the sixteenth century. The course will consist mainly of the study of English and French political writers of the two following centuries. The point of view will be the conflict between conservative or absolutist and liberal or democratic tendencies, and the different uses made of the notions of natural law and of social compact as foundations for opposing views will be investigated. The attempt will be made carefully to trace the connection of theories with practical politics, whether as cause or as result. This is a seminary course, with one session each week. Open to third and fourth year students.

2 hrs., both semesters. (———).

19. Department Seminary.—The Seminary is designed primarily to afford a practical training in methods of historical research through the use of original materials, and it provides also the advantages of a University Historical Society. The distinctive work of graduates falls mainly under direction of the Seminary. On invitation it may be taken by fourth year students in History and by others who are deemed qualified. All the instructors in the department will attend as members and leaders. The work at the weekly sessions will consist of the presentation and discussion of papers, reports, book reviews, and similar results

of independent research. A record of proceedings will be made by the secretary. Members of the Seminary are not expected to register for course 20. The work of the year falls into two main divisions: (*a*) studies in historical methods (first semester); (*b*) student reports on thesis investigations (second semester).

2 hrs., both semesters.

(Show, Duniway, Lapsley, Eaves, Anderson, Warren.)

20. Thesis or Research Work.—In all courses in History, unless otherwise specified, students will be given an additional hour of credit, on presentation of a satisfactory thesis embodying the results of independent study. Permission to register for thesis work must be obtained in each case from the major professor. As a rule, every student taking History as a major subject is required to register for thesis work; but no one should register until after consultation with the instructors in the courses which he proposes to take. In special cases permission will be given to register for two hours. When a student is taking two or more courses in History the same semester, he may select his thesis in connection with either of them. Topics for independent investigation are suggested in connection with the various courses in the Historical Department. Registration for thesis work is not intended to exempt students from such incidental reports or discussions as may be required in connection with any course.

1 hr., each semester.

21. Methods of Studying and Teaching History.—The course will open with a study of the methods of University work in history, dealing with the collection and criticism of the materials of history, methods of organization and interpretation, and the relation of history to the special social sciences. This part of the work will occupy half of the first semester. The remainder of the time will be given to the study of methods of instruction in secondary and lower grade schools. Among the topics considered will be: (*a*) time devoted to the subject; (*b*) courses of study; (*c*) the organization and interpretation of the material presented in the various grades; (*d*) the use of outlines, notebooks, maps, etc. Open to third and fourth year students, or to others by special permission. The course is accredited by the Department of Education. [In the future, this course will alternate with course 22.] [Omitted in 1901-02.]

2 hrs., both semesters. (Eaves.)

22. The Opening of the West.—Course 22 is a study of the occupation by the United States of the region between the Mississippi and the Pacific slope states. It is opened by a summary of the westward expansion prior to this occupation. Among the topics studied are the following: (*a*) the acquisition of the region; (*b*) relations of the United States with the Indian tribes claiming titles to the land; (*c*) development of the United States' policy in the control of the territories; (*d*) the administration of the public lands; (*e*) the exploration and opening of overland emigration and railroad routes; (*f*) the economic development. Course 22 will alternate with course 21, being given in 1901-02. Open to all. *2 hrs., both semesters.* (EAVES.)

23. History of Europe in the Seventeenth and Eighteenth Centuries.—This course will trace political history and international relations from the Peace of Westphalia to the French Revolution. A special study will be made of the rise of Russia under Peter the Great and Catherine II; of Prussia under Frederick II; and of the beginnings of the conflicts between Prussia and Austria for the headship of Germany. The period will be studied as one in which the "Old Regime" was breaking up in Western Europe in preparation for the new era of individualism and democracy. From this point of view will be studied the growth of the maritime, commercial, manufacturing, and colonial ascendency of England, the progressive intellectual movement in England and in France, the religious and humanitarian developments, the industrial revolution, and the break-down of the restrictive economic system in favor of arrangements based on freedom and individualism.

2 hrs., both semesters. (———.)

24. History of Germany in the Middle Ages.—Open to all who have taken course 3, of which it is a continuation. Beginning with the later Carolingian Monarchy, the course will traverse the history of the Saxon, Salian, and Hohenstauffen emperors, closing with the latter dynasty in A. D. 1268. Special attention will be given to papal and Italian politics. Ability to read German is important, but not indispensable.

2 hrs., both semesters. (SHOW.)

25. History of France in the Middle Ages. —Open to students who have had course 3, of which it is a continuation. Beginning with the later Carolingian period, the course traces the growth of feudal institutions in France, the rise of the

Capetian monarchy, the influence of the Crusades, the wars with England, and other important topics, closing with the death of Charles VIII (A. D. 1498). Ability to use German and French authorities is of great service in this course, but is not required. Subjects for thesis investigations will be offered in connection with the course. [Omitted in 1901-02.]

2 hrs., both semesters. (Show.)

25a. The Development of the French Monarchy, from Hugh Capet to Charles VIII.—The object of this course is to trace the growth of the royal power in France to the end of the Middle Ages. The lectures treat of political history and central institutions. The course is intended to serve as an introduction to a more detailed study of mediæval France as well as to the study of later French history. An ability to read French and German, although not indispensable, will be of the greatest advantage to the student. Open to those who have had one year's work in History. *2 hrs., 2d semester.* (Lapsley.)

26. Seminary in Mediæval History.—Course 26 may be taken only by permission of the instructor. Reasonable facility in reading Latin, German, and French is indispensable. The course centers each year on the critical study of some characteristic Latin text of the Middle Ages. In 1901-02 the Seminary will study the *Res Gestae Saxonicae* of Widukind. The method of instruction is entirely informal and practical.

2 hrs., both semesters. (Show.)

27. English Political and Constitutional History, Tudor and Stuart Periods.—Course 27 is open to graduates, and to advanced undergraduates with the approval of the instructor. It is a detailed study of the political and constitutional questions arising in the period from 1485 to 1688. The lectures include a careful reading and interpretation of the most important original documents accessible in print. Frequent written exercises on assigned topics give practice in judging debatable points of the history. [Course 27 will not be given in 1901-02.]

3 hrs., both semesters. (Duniway.)

28. Pacific Slope History.—This course aims to give a general knowledge of the history of the development of the Pacific Slope of the United States. In connection with the early history of California, the most characteristic features of the Spanish-American colonial institutions will be brought out. In the study of the period since the occupation by the United States

special attention will be given to the social and economic development of the region. [This course will alternate with course 30, being given in 1901-02.] Open to all.

3 hrs., both semesters. (EAVES.)

29. Oral Discussion.—Open to graduates and advanced undergraduates. This course should usually be preceded by English 9. The aim of the course is twofold: (1) to give the student careful training in the preparation of spoken arguments on public questions in the fields of history, politics, economics, and sociology; (2) to afford experience in public speech on these questions, with the benefit of criticism from the instructors. [See English 13.] *2 hrs., both semesters.*

(DUNIWAY, LATHROP.)

30. The Development of European Relations in the Orient.—The work of this course will center on topics connected with the growth of English commercial and colonial relations in this region. The contemporaneous development of the interests of other European powers and of the United States, and recent changes in China and Japan, due to the growth of these influences, will also be examined. Special attention will be given to colonial institutions, the economic factors causing the important changes in the history of the region, and the sociological problems growing out of the meeting of different races and civilizations. This course will alternate with course 28, and will be given for the first time in 1902-03. Open to students who have had two years' work in history and economics.

3 hrs., both semesters. (EAVES.)

31. Seminary in Western History.—This is an investigation course, and aims to give training in the organization and interpretation of the sources of the history of the western part of the United States. The year will be devoted to a coöperative study of one important topic, all the members of the class assisting in the collection of material and taking part in the discussions about its organization and interpretation. The separate chapters of the monograph embodying the results of the class-room work will be written by different members, and presented to the seminary for criticism. The topic studied in 1901-02 will be The Development of the United States Indian Policy and of Institutions for the Administration of Indian Affairs. Open to a limited number of advanced students on application to the instructor.

2 hrs., both semesters. (EAVES.)

ECONOMICS AND SOCIOLOGY

————————, Professor of Economics.

MARY ROBERTS SMITH, Ph. D., Associate Professor of Sociology.

*EDWARD DANA DURAND, Ph. D., Assistant Professor of Finance and Administration.

BURT ESTES HOWARD, A. M., Assistant Professor of Political Science.

JAMES HARRIS CURRAN, Ph. D., Acting Assistant Professor of Economics.

CHARLES REIGHLEY DETRICK, A. B., Assistant in Economics.

This Department requires of its candidates for graduation, thirty hours of economics and sociology and ten hours of history, or a total of one-third of their college work. The work in the Department will be best distributed as follows: First year, not over four hours; second year, six hours; third year, ten hours; fourth year, ten hours. Courses 3, 3*a*, 10, and 11 are open to first year students. Course 1 should be taken the second year. Course 18 is required in the fourth year.

Extreme specialization is not encouraged in the undergraduate work of the department. The aim is to lay a foundation for law, banking, journalism, the public service, scientific charity work, mercantile pursuits, and graduate professional study. Students are strongly advised to elect at least one course in Biology, Mathematics, and English Composition, and to obtain a good reading knowledge of both French and German, in their first and second years.

The following courses include some of those given in 1900-1901, as well as a preliminary announcement for 1901-02.

1. Elements of Economics. —An introduction to the subject, designed for the general student as well as for those specializing in the department. Not open to students in their first year. *3 hrs., both semesters.* (————.)

2. Outlines of Economics.—A course for students in other departments who wish in briefer compass than course 1 a systematic outline of the principles of economics. Not open to first year students, nor to students who have their major in this department. *3 hrs., 2d semester.* (————.)

3. Economic History of the United States.—The lead-

*Assistant Professor DURAND will be absent on leave during 1901-02.

ing facts in American economic development from colonial times to the present. [Not given in 1901-02.]

2 hrs., both semesters. (HOWARD.)

3a. Economic History of Europe.—A study of the economic experiences and the commercial policy of Europe from the time of the Norman Conquest, but especially during the period 1450-1750. The endeavor is to aid in the interpretation of contemporary facts by tracing the evolution of modern industrial institutions. *2 hrs., both semesters.* (HOWARD.)

4. Money.—Origin and development of money; functions of money; the precious metals, their history, production, and use; government notes; various standards; international bimetallism, bank notes; elementary treatment of banking and credit. Presupposes courses 1 and 3. *3 hrs., 2d semester.* (CURRAN.)

5. Social Legislation.—Individualism and socialism; function of the state; legislative proposals made by various socialists; "Socialists of the Chair"; State regulation of trade; factory legislation; insurance; arbitration, etc. Presupposes course 1 or course 2. *2 hrs., 2d semester.* (CURRAN.)

6. American Politics.—A study of American Federal, State, and local political institutions. Open only to advanced students. *2 hrs., 1st semester.* (HOWARD.)

7. Problems of American Democracy.—Discussions of the ballot, direct legislation, proportional representation, the "machine," political parties, etc. Not open to first year students.

2 hrs., 2d semester. (HOWARD.)

8. Political Theory.—Studies in the origin of the state, nature of the state and theories of the state. Open to third and fourth year students. *2 hrs., 1st semester.* (HOWARD.)

9. Modern Federal Government.—A study of the principles of federal government and their application to the five great modern federal States. Open to advanced students only.

2 hrs., 2d semester. (HOWARD.)

10. Sociology of the Family.—The historical development and conditions of the modern family. Lectures, one required paper, and assigned reading.

2 hrs., 1st semester. (M. R. SMITH.)

11. Race Problems.—A historical, sociological, and statis-

tical study of the negro and Chinese elements in the population. Lectures, assigned reading, and reports.

2 hrs., 2d semester. (M. R. Smith.)

12. Statistics and Sociology.—Vital and social statistics, with special reference to method. Lectures, demonstrations, charting, and handling of statistics by students. Not open to first year students. [Not given in 1901-02.]

2 hrs., 2d semester. (M. R. Smith.)

13. Causes of Poverty.—A study of abnormal conditions; the social causes and effects of degeneration, vice, and pauperism. Lectures, assigned reading, and reports. Open to students who have had nine hours' work in the department.

2 hrs., 1st semester. (M. R. Smith.)

14. Charities.—Supplementary to course 13. Lectures and assigned reading. Visits to the charitable institutions of the State by the class, and a detailed study of one institution by each student. Open to students who have had nine hours in the department and who take course 13.

3 hrs., 1st semester. (M. R. Smith.)

15. Criminology.—The anthropology of the criminal, and the causes and conditions of crime. Lectures and assigned reading. Open to students who have had nine hours work in the department. *2 hrs., 2d semester.* (M. R. Smith.)

16. Penology.—Supplementary to course 15. Treatment of criminals; police, police stations and courts, county jails, state prisons, penitentiaries, and reformatories. Lectures, reading, visitation and study of penal institutions. Open to students who have had nine hours' work in the department and who take course 15. *3 hrs., 2d semester.* (M. R. Smith.)

17. Thesis.—In certain courses students are given an additional hour of credit on presentation of a satisfactory thesis embodying the results of independent work. Permission to register for thesis work must be obtained in each case from the major professor. *1 hr., either semester.*

18. Seminary.—Book reviews, reports, and thesis. The subject of investigation for 1900-01 was "Colonies and Colonization." Required of graduates and fourth year students having their major in this department. No registration except at the beginning of the academic year. *2 hrs., both semesters.*

(M. R. Smith, Howard, Curran, Detrick.)

LAW

Nathan Abbott, A. B., LL. B., Professor of Law.

Clarke Butler Whittier, A. B., LL. B., Associate Professor of Law.

James Parker Hall, A. B., LL. B.. Associate Professor of Law.

Jackson Eli Reynolds, A. B., LL. B., Assistant Professor of Law.

Charles Ross Lewers, A. B., Assistant Professor of Law.

Joseph Hutchinson, A. B., LL. B., Lecturer in Law.

Curtis H. Lindley, Lecturer on Mining and Irrigation Law.

Charles Sumner Hamlin, Lecturer on International Law.

This Department offers the curriculum usual in professional Law schools, and it aims to give such training as will constitute a thorough preparation for the practice of law. The course is intended to occupy three full collegiate years of the student's time. The theory of the Department is that a general university training, in addition to the law work proper, is essential to complete preparation for the practice of law. Therefore the professional degree of Bachelor of Laws will ordinarily be given only to students who have had such training. Those who have received the degree of Bachelor of Arts or an equivalent degree from institutions of recognized collegiate rank and those who are admitted to the fourth year class of the University meet this requirement of general university training and may therefore complete the course in law in three years.

However, it is believed that the most advantageous results can be obtained by beginning the work in law during the undergraduate years in connection with other studies in the University. With this in view, the Department permits students on entering the University to register with law as their major subject, and to complete the courses comprised in the first of the three years of the law course during their four undergraduate years. In this way students will save a year's time, as compared with those who begin the study of law only after receiving their baccalaureate degrees. For the order in which this work may be taken see below under "Admission to the Courses in Law."

Special students, and regular undergraduates over twenty-one years of age, may ordinarily complete the courses in law in three years without meeting the above requirements, but degrees will be conferred upon these only under the conditions stated below under "Degrees."

Admission to the Courses in Law

There is no admission to the Department of Law independent of admission to the University. The student must enter the University either as undergraduate, graduate, or special, in accordance with the requirements stated on pp. 31-46. He is advised, however, to enter in the fall, as the law courses commence then and continue through the year. Having thus entered he is admitted to the courses in law as follows:

Regular Undergraduates.—Regular undergraduates, candidates for a degree, are not admitted to any of the courses in law during the first year of their undergraduate course. On entering the University, the student, under the advice of the Faculty of Law, undertakes a course of study which in his first year comprises subjects of a general nature leading up to the study of law. In his second year he continues these and takes the course in Elementary Law. In the third year he takes two other courses in law; in his fourth year, three more. During his undergraduate course he also takes English 8, preferably in his first or second year. As he begins to take up work in law he drops an equivalent part of his general studies. After taking the degree of Bachelor of Arts he completes the second and third years of the law course.

Students in regular undergraduate standing, who are over twenty-one years of age, and who are not candidates for the degree of Bachelor of Arts, may take such courses in law as the major professor shall approve, ordinarily completing the law course in three years; but they are candidates for the degree of Bachelor of Laws only as stated below under "Degrees."

Students entering with advanced standing may take such courses in law as an equal standing obtained in the University would entitle them to.

Only the first year law courses can ordinarily be counted toward the degree of Bachelor of Arts, but by special permission of the Faculty of Law, students not intending to practice law may take such courses as will aid them in other pursuits.

Graduates.—Students admitted to graduate standing, who have not completed one year of their law course, may undertake all the first year subjects in law during their first year in the department, and thus, as suggested above, complete their law course in three years.

Special Students.—Special students may take such courses in law as the major professor shall approve, ordinarily completing the law course in three years, but are candidates for degrees only under the conditions stated below under "Degrees."

Admission to Second and Third Year Courses.—Admission to the second year courses presupposes that the student has completed or is pursuing all the first year courses.

Admission to the third year courses presupposes that the student has completed or is pursuing at least five of the second year courses.

[For the present some of the second and third year courses will be given only in alternate years, and so it may be necessary for some students admitted to the second year courses to take third year courses, and *vice versa*.]*

Work in Law done Elsewhere

Courses in law taken elsewhere will not be considered as meeting the requirements of the department, except upon satisfactory examination in all the subjects offered. Examinations may be taken as follows: (*a*) in *all* subjects at the end of the spring semester, in May; (*b*) in *first year* subjects at the opening of the fall semester, in September; (*c*) on request, entering students will be given examinations in second and third year subjects at the opening of the fall semester. For these examinations the applicant should prepare himself by a study of the books used in the several courses.

Moot Courts

Moot courts are held under the direction of the department, and the instructors assist in the selection of cases, and examine the briefs and opinions rendered.

Library

Students supplement the classroom work by collateral reading in the Law Library, which contains complete sets of all English and Irish reports, and those of the leading American jurisdictions, most of the Canadian reports, all the recent American reports,

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* For the sake of clearness the following table is appended. Students entering the University naturally divide themselves into the following classes:

[a] Entering first year class. Take no law during first year; Elementary Law, second year; two courses, third year; three courses, fourth year; and complete the law course in two graduate years.

[b] Entering second year class. Take law courses as if first year work had been completed here. See [a].

[c] Entering third year class. Take Elementary law and two other courses during first year; three courses, second year; and complete law course as in [a].

[d] Entering fourth year class. Take all first year courses during first year; and complete law course as in [a].

[e] Entering as graduate students. Take all first year law subjects during first year; and complete course in three years.

[f] Special students take any law work approved by major professor, but obtain no degree, except as provided below.

and a large number of text-books and works of reference on legal topics.

Degrees

Students of the University whose major subject is Law, on completing the first year law courses, English 8, and satisfying all other University requirements, will receive the degree of Bachelor of Arts.

Students who have received the degree of Bachelor of Arts, or its equivalent, and who have completed fifteen courses in Law, exclusive of Elementary Law and the Special Courses in Law, will be given the professional degree of Bachelor of Laws, provided they have spent two years in resident study at the University, one year of which has been as graduate students. Special students, and regular undergraduates over twenty-one years of age, not candidates for the degree of Bachelor of Arts, who have spent three years in resident study at the University and have completed the above work with distinguished excellence, will also be given the degree of Bachelor of Laws.

Courses of Instruction

FIRST YEAR COURSES

1. Elementary Law.—Lectures. No text-book. The aims of this course are: first, to give the students of the department such an introduction to the law as will enable them to pursue their further work to the best advantage; secondly, to give to students of other departments a few general conceptions which may prove of value to them in other work, in business, or elsewhere. Open to second year students. Three lecture hours weekly.

2 hrs., both semesters.

(ABBOTT, WHITTIER, HALL, REYNOLDS, LEWERS.)

2. Contracts.—Text-book: Keener's Cases on Contracts.

3 hrs., both semesters. (WHITTIER.)

3. Property I.—Text-book: Gray's Cases on Property, Vols. I and II. *3 hrs., both semesters.* (ABBOTT.)

4. Torts.—Text-book: Ames and Smith's Cases on Torts.

3 hrs., both semesters. (WHITTIER.)

5. Criminal Law and Procedure.—Text-book: Beale's Cases on Criminal Law. May's Criminal Law is recommended for reading in connection with this course.

3 hrs., both semesters. (LEWERS.)

6. Equity I.—Text-book: Keener's Cases on Equity Jurisdiction, Vol. I. *2 hrs., both semesters.* (REYNOLDS.)

SECOND YEAR COURSES

7. Agency.—Text-book: Wambaugh's Cases on Agency. *2 hrs., both semesters.* (REYNOLDS.)

8. Bills and Notes.—Text-book: Ames's Cases on Bills and Notes. *3 hrs., both semesters.* (HALL.)

9. a. Carriers.—Text-book: Beale's Cases on Carriers, Part I; McClain's Cases on Carriers. This course deals with the history of bailments, the rights and liabilities of passengers and freight carriers, express companies, private carriers, innkeepers, sleeping car companies, etc.

b. Damages.—Text book: Beale's Cases on Damages. A systematic development of the rules and principles governing the amount of damages to be recovered wherever legal rights have been infringed.

These two subjects, taken together, comprise one course and can not be taken separately. [Given in 1901-02, and alternating thereafter with Conflict of Laws.]

2 hrs., both semesters. (LEWERS.)

10. Equity II: Trusts.—Text-book: Ames's Cases on Trusts. *2 hrs., both semesters.* (LEWERS.)

11. Evidence.—Text-book: Thayer's Cases on Evidence (2d ed.). This course, when possible, should be preceded by Pleading. [Given in 1902-03, and alternating thereafter with Pleading.] *3 hrs., both semesters.* (WHITTIER.)

12. Persons.—Text-book: (To be chosen). [Given in 1902-03, and alternating thereafter with Property III.]

2 hrs., both semesters. (ABBOTT.)

13. Pleading.—Text-book: Ames's Cases on Pleading; Langdell's Cases on Equity Pleading. Common law and equity pleading, with reference to code pleading. [Given in 1901-02, and alternating thereafter with Evidence.]

3 hrs., both semesters. (WHITTIER.)

14. Property II.—Text-book: Gray's Cases on Property, Vols. III and IV. *3 hrs., both semesters.* (ABBOTT.)

15. Sales.—Text-book: Williston's Cases on Sales. [Given in 1902-03, and alternating thereafter with Partnership.]
2 hrs., both semesters. (HALL.)

THIRD YEAR COURSES

16. Conflict of Laws.—Text-book: Beale's Cases on Conflict of Laws. [Given in 1902-03, and alternating thereafter with Carriers and Damages.]
2 hrs., both semesters. (LEWERS.)

17. Constitutional Law.—Text-book: Thayer's Cases on Constitutional Law. Origin and development of constitutions; written and unwritten constitutions; functions of the judiciary; making and changing written constitutions; jurisdiction of the United States; citizenship; fundamental personal, property, and political rights; police power; eminent domain; taxation; *ex post facto* and retroactive laws; laws impairing the obligation of contracts; regulation of commerce; money; war powers. Open also to well-prepared fourth year students in the departments of History and Economics.
3 hrs., both semesters. (HALL.)

18. Corporations.—Text-book: Keener's Cases on Corporations. [Given in 1902-03, and alternating thereafter with Equity III.] *3 hrs., both semesters.* (REYNOLDS.)

19. Equity III.—Text-book: Keener's Cases on Equality Jurisdiction, Vols. II and III. [Given in 1901-02, and alternating thereafter with Corporations.]
3 hrs., both semesters. (REYNOLDS.)

20. Partnership.—Text-book: Ames's Cases on Partnership. [Given in 1901-02, and alternating thereafter with Sales.]
2 hrs., both semesters. (HALL.)

21. Property III.—Text-book Gray's Cases on Property, Vols. V and VI. [Given in 1901-02, and alternating thereafter with Persons.] *3 hrs., both semesters.* (ABBOTT.)

SPECIAL COURSES

22. California Practice.—Text-book: California Code of Civil Procedure. *1 hr., both semesters.* (HUTCHINSON.)

23. Mines and Irrigation.—Lectures. No text-book.
1 hr., both semesters. (LINDLEY.)

24. International Law.—Text-book: Snow's Cases on International Law. [See course 17 in History.]

2 hrs., both semesters. (DUNIWAY.)

24a. International Law, with special reference to the Fur Seal question.—A course of lectures by the Hon. Charles Sumner Hamlin, Assistant Secretary of the Treasury under President Cleveland, to be given during the second semester, 1901-02.

25. Roman Law and Institutions.—Text-book: Institutes of Gaius. [See course 17 in Latin.]

1 or 2 hrs., 2d semester. (PEASE, FAIRCLOUGH.)

DRAWING AND PAINTING

BOLTON COIT BROWN, M. P., Professor of Drawing and Painting.

ARTHUR BRIDGMAN CLARK, M. Ar., Associate Professor of Drawing and Painting.

ZOË WORTHINGTON FISKE, B. P., Instructor in Drawing and Painting.

The Department aims to meet the needs of three classes of students: students who wish training in artistic perception and graphic expression, for its general culture value; students who wish to begin their professional art study, as major students, while still receiving other university training; and, technical students, to whom some drawing is essential.

Through a gift to the Department from Mrs. Edward Barron a series of four specially planned studios has been erected, in which the work of the Department is very perfectly accommodated.

1. Elementary Drawing.—The visual attention is disciplined and brought under control; visual and mental comprehensiveness is encouraged; a free, natural, direct, technical expression is aimed at. Still-life objects are drawn during the first semester, and heads from the cast and life, during the second. Registration for less than three hours (nine actual hours of drawing per week) will be permitted only to engineering students. At least three hours for one semester is required as preparation for course 5, and three hours for a year in this course, or this course combined with 5, as preparation for courses 2 and 3. Open to all students.

2 to 5 hrs., both semesters. (CLARK, FISKE.)

2. Color: Oil Painting.—Chiefly still-life; though when the student's power warrants it, landscape study may be included; and, in case of advanced students, portrait study may be substituted for still-life work. Open to those who have had course 1, or its equivalent, when in the judgment of the instructor, they are qualified to undertake the work.

2 to 5 hrs., both semesters. (BROWN, CLARK.)

3. Advanced Drawing, The Head.—This course is intended to develop equally accuracy of eye, observation of structure and character, sensitiveness to beauty, and manual skill.

3 to 5 hrs., both semesters. (BROWN.)

4. Scientific Perspective.—This course deals first with the mathematical theory worked out in problems upon the drafting board, and afterwards with the utilization of the theory in actual out-door drawings from nature. Course 4 is given in alternate years; will be omitted in 1901-02.

2 hrs., 2d semester. (CLARK.)

5. Landscape.—Chiefly out-door work; but supplemented, during the colder weather of each semester, by study from drawings and photographs, with special attention to decorative composition. The pen, brush (monochrome), and pencil are used, according to the needs of each individual. Open to students who have had one semester of course 1.

3 to 5 hrs., both semesters. (CLARK.)

6. Lectures on Art and Esthetics.—The nature of the esthetic faculty. Beauty of solid form, of surfaces, of lines, of light, of color. Open to all third year and fourth year students and to all students who have taken course 1, or its equivalent. Only a limited number will be admitted to this class, and the permission of the instructor must be obtained before registering. The sessions will, however, be open, and all comers will be welcome.

1 hr., 1st semester. (BROWN.)

MATHEMATICS

PURE MATHEMATICS

ROBERT EDGAR ALLARDICE, A. M., Professor of Mathematics.

RUFUS LOT GREEN, A. M., Professor of Mathematics.

HANS FREDERICK BLICHFELDT, Ph. D., Assistant Professor of Mathematics.

† GEORGE ABRAM MILLER, Ph. D., Assistant Professor of Mathematics.

ERNEST WILLIAM RETTGER, Ph. D., Instructor in Mathematics.

ERNEST HARVEY SHIBLEY, A. B., and WILLIAM ALBERT MANNING, A. B., Assistants in Mathematics.

The courses in this department have been arranged to meet the wants of two classes of students: students whose major subject is Mathematics, and students who, while taking their major in some other department, desire to include some mathematics in their course. Students in engineering are provided for in the Department of Applied Mathematics.

For students whose major subject is Mathematics the following programme of work is recommended: In the first year, courses 2, 3, and 4; in the second year, courses 9 and 10; in the third year, courses 11 and 12; while the work during the fourth year and for graduate students may be selected from the remaining courses, and from the Department of Applied Mathematics. The advanced courses will, for the most part, be given once in two or once in three years, and it is hoped that the advanced students will thus have the opportunity of studying the more important branches of modern mathematics.

Students who desire to take one or more years of mathematics as a part of a liberal training are recommended to begin their work in this department with one or more of the courses 1, 2, 3, 4.

1. Solid Geometry.—Elementary course.

2 hrs., 1st semester. (MANNING.)

2. Trigonometry.—Elementary course, with applications involving logarithmic calculation.

2 hrs, 2d semester. (SHIBLEY.)

3. Geometry.—This course includes a discussion of some of the more modern developments of Synthetic Geometry. Open

† Beginning September, 1901.

to students who have credit for Plane Geometry as an entrance subject. *2 hrs., both semesters.* (ALLARDICE.)

4. Algebra.—Fundamental laws, degree, symmetry, indeterminate coefficients, remainder theorem, factors, complex numbers, introduction to theory of equations, progressions, permutations, and combinations. Presupposes entrance credit in Elementary Algebra. *3 hrs., both semesters.* (GREEN.)

Students making mathematics their major subject should take courses 3 and 4 as the first year's work, and those who have not had trigonometry should take also course 2.

5. Determinants.—Elementary course. Presupposes course 4. *2 hrs., 1st semester.* (BLICHFELDT.)

6. Non-Euclidean Geometry.—Presupposes course 3. *2 hrs., 2d semester.* (BLICHFELDT.)

9. Introduction to the Calculus.—Limits, indeterminate forms, series, partial fractions, differentiation, simpler methods of integration, with applications. Presupposes course 4. *2 hrs., both semesters.* (GREEN.)

10. Co-ordinate Geometry.—An elementary course in the analytic geometry of the conic sections, including the discussion of the general equation of the second degree. Presupposes course 4. *3 hrs., both semesters.* (BLICHFELDT.)

Courses 9 and 10 form the regular work, during the second year, for students whose major subject is Mathematics.

11. Advanced Co-ordinate Geometry.—General properties of conics, systems of conics, homogenous coördinates, general properties of plane curves, curves of the third and fourth order. Presupposes course 10. *2 hrs., both semesters.* (GREEN.)

12. Differential and Integral Calculus.—Lectures on the Differential and Integral Calculus, with applications to the theory of plane curves, on the lines of Williamson's treatises. *3 hrs., both semesters.* (ALLARDICE.)

13. Advanced Calculus.—A continuation of course 12. *2 hrs., both semesters.* (BLICHFELDT.)

13a. Integral Calculus.—[Not given in 1901-02.] *3 hrs., both semesters.* (RETTGER.)

14. Theory of Functions.—Elementary course.
2 hrs., both semesters. (ALLARDICE.)

15. Differential Equations.—Text-book, Forsyth's Differential Equations. *3 hrs., both semesters.* (ALLARDICE.)

16. Definite Integrals.
2 hrs., 2d semester. (ALLARDICE.)

17. Modern Analytical Geometry.—Clebsch. [Not given in 1901-02.] *5 hrs., both semesters.* (GREEN.)

19. Geometry of Three Dimensions.—Salmon's text. [Not given in 1901-02.] *3 hrs., both semesters.* (GREEN.)

20. Theory of Functions.—Extended course. Forsyth. [Not given in 1901-02.] *3 hrs., both semesters.* (ALLARDICE.)

21. Theory of Substitutions.
3 hrs., 1st semester. (BLICHFELDT.)

22. Continuous Groups (Lie).
3 hrs., 2d semester. (BLICHFELDT.)

23. Projective Geometry.—Lectures following Reye's Geometrie der Lage. [Not given in 1901-02.]
2 hrs., 1st semester. (ALLARDICE.)

APPLIED MATHEMATICS

LEANDER MILLER HOSKINS, C. E., Professor of Applied Mathematics.

1. Algebra. *5 hrs., 1st semester.* (——)

2. Solid Geometry. *2 hrs., 1st semester.* (——)

3. Trigonometry. *2 hrs., 2d semester.* (——)

4. Co-ordinate Geometry.
5 hrs., 2d semester. (——)

Courses 1, 2, 3 and 4 should be taken during the first year by students in Engineering.

5. Calculus. *3 hrs., both semesters.* (——)

6. Theoretical Mechanics. —An elementary course, covering the fundamental principles of Statics, Kinematics, and Kinetics, restricted mainly to coplanar forces and to plane motion of particles and of rigid bodies. An elementary treatment of Graph-

ical Statics is included. The course is designed as a preparation for the courses in Applied Mechanics taken by students of Engineering, but is open to all whose preparation includes Coördinate Geometry. Calculus must either precede this course or be taken at the same time. *5 hrs., both semesters.* (Hoskins.)

Courses 5 and 6 should be taken during the second year by students in Engineering.

7. Theoretical Mechanics.—An elementary course, designed primarily for students whose major work is in Mathematics or in Mathematical Physics, but open to others having the requisite preparation. A working knowledge of the elements of Differential and Integral Calculus is presupposed.

3 hrs., both semesters. (Hoskins.)

8. Theoretical Mechanics.—An advanced course on the Statics and Kinetics of rigid bodies and of systems of bodies. Open to students who have completed course 6 or course 7.

3 hrs., both semesters. (Hoskins.)

Courses in one or more of the following subjects will be open to students having the requisite mathematical preparation:

Theory of Attraction and of the Potential Function.

Hydromechanics.

Theory of Elasticity.

These courses must be preceded by course 8, or its equivalent.

PHYSICS

Fernando Sanford, M. S., Professor of Physics.

Herman De Clercq Stearns, A. M., Associate Professor of Physics.

Samuel Jackson Barnett, Ph. D., Assistant Professor of Physics.

Frederick John Rogers, M. S., Assistant Professor of Physics.

Joseph Grant Brown, Laboratory Assistant in Physics.

I. LABORATORY COURSES

1. Dynamics.—Including hydrostatics and pneumatics. Open only to students who have had algebra and plane geometry. This course or its equivalent is required as a preparation for each of the courses following. One or two lectures and two laboratory

periods per week. All students are urged to register for four hours if they can spare the time.

3 or 4 hrs., either semester. (Rogers, Brown.)

2. Electricity and Magnetism.—One lecture and two laboratory periods per week.

3 hrs., 2d semester. (Stearns, Barnett.)

3. Heat and Sound.—Two laboratory periods per week.

2 hrs., either semester. (Stearns.)

4. Elementary Optics.—Open only to students who have had trigonometry. Only a small class can be accommodated, and the preference will be given to students who need this training for their major subject.

2 hrs., 2d semester. (Sanford.)

Courses 1, 2, 3, and 4 constitute a five hours' course for one year in general Physics, and are intended to precede the advanced courses.

5. Heat, Sound, and Light.—This is a special course designed for engineers or others who cannot spare the time required for courses 3 and 4. One lecture and two laboratory periods per week. The first part of each laboratory period will usually be devoted to a brief lecture.

3 hrs., 2d semester. (Rogers.)

6. Electricity and Magnetism.—Open to students who are taking or have taken calculus. The course includes, in addition to the elementary theory and experiments, an extended series of electrical measurements.

3 hrs., both semesters. (Barnett.)

7. Experimental Optics.—For major students in Physics. A few others will be admitted by special arrangement.

2 hrs., both semesters. (Sanford.)

8. Electrical Measurements.—Open to students who have taken courses 1 and 2 (or their equivalent) and who have taken or are taking calculus.

3 to 5 hrs., both semesters. (Barnett.)

9. Investigation of Original Problems in the Laboratory.

Hours to be determined in each case. (Sanford.)

II. LECTURE COURSES

a. General Physics.—Open to students who have had courses 1, 2, 3, and 4, or their equivalent.
3 hrs., both semesters. (SANFORD.)

b. Electrical Theory.—Open to students who have taken course 2 or course 6, and calculus.
3 hrs., both semesters. (BARNETT.)

c. Teachers' Course in Elementary Physics.—Open to students who have had courses 1, 2, 3, and 4, or their equivalent.
1 hr., both semesters. (SANFORD.)

d. Theory of Heat.—Including Thermodynamics.
3 hrs., 1st semester. (STEARNS.)

e. Vibratory Motion.—A theoretical course consisting of recitations and lectures illustrated by occasional lecture experiments and a few carefully executed laboratory experiments. A knowledge of differential and integral calculus is required.
3 hrs., 1st semester. (ROGERS.)

f. Kinetic Theory of Gases.
3 hrs., 2d semester. (STEARNS.)

g. History of Physics.—Lectures and Readings on the history of physical science with special reference to the development of theories. The first four courses in physics are required before entering this course. *2 hrs., 2d semester.* (ROGERS.)

Courses 6, 7, and 8 in Applied Mathematics are also recommended for major students in physics.

Laboratory Fees

For laboratory courses 1, 2, 5, and 6, a fee of three dollars a semester will be charged. For courses 3, 4, and 7, the fee will be two dollars. In courses 8 and 9, the fee will depend upon the number of hours credit and the apparatus used, but will not exceed five dollars per semester.

CHEMISTRY

JOHN MAXSON STILLMAN, Ph. D., Professor of Chemistry.

GEORGE MANN RICHARDSON, Ph. D., Professor of Organic Chemistry.

LIONEL REMOND LENOX, Ph. B., Professor of Analytical Chemistry.

STEWART WOODFORD YOUNG, B. S., Assistant Professor of Chemistry.

ALVIN JOSEPH COX, FRANCIS JAMES REIDY, FRANK L. HESS, RICHMOND WHEELER, JESSIE ARCHIBALD MOORE, A. B., and ELIOT GRAY POTTER, Laboratory Assistants in Chemistry.

The new Chemistry building will probably be ready for occupation during the year 1901-02. The main laboratories and lecture rooms are on the first and second floors, the basement being used for storage. The two lecture rooms will accommodate 200 and 67 students respectively. The laboratory for Elementary Chemistry has 72 desks, and is capable of accommodating two sections of 72 each. The laboratory for qualitative analysis is similarly equipped. The laboratory for quantitative analysis has 60 desks; another laboratory for advanced work the same number. The laboratory for Organic Chemistry has 30 desks; for Physical Chemistry, 25 desks; while smaller laboratories give facilities for water analysis, toxicology, inorganic preparations, and for private research. A chemical museum and collection room and library are also included in the building.

The Assaying Laboratory contains furnace room and wet assay laboratory, with accessory conveniences, and will accommodate 28 students, or, if necessary, two sections of 28 each.

I. LECTURE COURSES

1. Elementary Inorganic Chemistry.—Explaining and reviewing laboratory course *a*, and open, in connection with that course, to all students in the University.

2 hrs., either semester. (RICHARDSON, YOUNG.)

2. General Inorganic Chemistry.—Lectures based on the periodic system and illustrated with experiments. Open to all students who have completed courses 1 and *a*, or an equivalent.

2 hrs., both semesters. (STILLMAN.)

3. Organic Chemistry.—Lectures and reviews on the Chem-

istry of Carbon Compounds. Open to students who have completed course 2. *2 hrs., both semesters.* (RICHARDSON.)

4. Industrial Chemistry.—Lectures on the process of chemical arts and industries—fuels, acid and alkali manufacturing, glass, explosives, sugar-making and refining, petroleum, etc. Lectures in this course are also given by Professors RICHARDSON (Dyes), and LENOX (Iron and Steel). Open to students who have completed courses 2 and 3; or may be taken concurrently with course 3.

2 hrs., both semesters. (STILLMAN.)

5. History of Chemistry.—Open to students who have completed courses 2 and 3. [This course will not be given in 1901-02.]

2 hrs., 1st semester, in alternate years. (RICHARDSON.)

6. Theories of Chemistry.—Modern concepts in Chemical Theory. Open to students who have completed courses 2 and 3.

2 hrs., 2d semester. (STILLMAN.)

7. Urine Analysis.—In connection with laboratory course *g*. Open to students who have completed at least one semester's work in Quantitative Analysis. [This course will be given in 1901-02.] *2 hrs., 1st semester, in alternate years.* (LENOX.)

8. Advanced Organic Chemistry.—Advanced topics in Organic Chemistry, including Stereo-Chemistry. Open to students who have completed course 3. [This course will be given in 1901-02.]

2 hrs., 1st semester, in alternate years. (RICHARDSON.)

9. Toxicology.—In connection with laboratory course *h*. Experimental lectures on the detection of the more important organic and inorganic poisons. Open to those who have completed at least one semester's work in Quantitative Analysis. [This course will not be given in 1901-02.]

2 hrs., 1st semester, in alternate years. (LENOX.)

10. General Physical Chemistry.—Lectures covering as far as possible the whole field of physical chemistry. Open to students who have completed course 6 in Chemistry, courses 3 and 4 in Mathematics (completion of course 12 in Mathematics is also urgently advised), and courses 1, 2, and 3 in Physics (course *a* in Physics is also urgently advised.)

5 hrs., both semesters. (YOUNG.)

11. Physical-Chemical Measurements.—An informal course of lectures given as needed in connection with course *m*.

No credit. (YOUNG.)

12. Seminary in Chemistry—Discussion of assigned topics in theoretical and general Chemistry. Open to graduate students, and to advanced undergraduates in Chemistry, with the approval of the faculty in Chemistry. *1 hr., both semesters.*

13. Qualitative Analysis.—In connection with laboratory course *b*. *1 hr., either semester.* (LENOX.)

II. LABORATORY COURSES

a. Elementary Inorganic Chemistry.—Experiments in Elementary Inorganic Chemistry in connection with course 1.

3 afternoons, either semester.
(RICHARDSON, YOUNG, REIDY, POTTER, MOORE.)

b. Qualitative Analysis.—Open to students who have completed courses 1 and *a*, or who have passed the examination in Elementary Chemistry.

3 afternoons, either semester, (LENOX, COX.)

c. Inorganic Preparations.—A laboratory course in the preparation and purification of Inorganic Compounds. Open to students who have completed courses 1 and *a*.

3 afternoons, either semester. (YOUNG.)

d. Preparation of Typical Carbon Compounds.—Open in connection with course 3 to students who have completed course *b*.

3 afternoons, either semester. (RICHARDSON.)

e. Quantitative Analysis.—Training in manipulation in gravimetric and volumetric methods. Work begins either semester. Students in other departments than Chemistry may register for three afternoons if they cannot arrange for four, as is recommended. Open to students who have completed courses 2, 13, and *b*; or may be begun with the second semester of course 2.

4 afternoons, either semester. (STILLMAN, COX.)

f. Mineral Analysis.—Systematic analysis of representative minerals. Open to students who have completed course *e*, and required of students whose major subject is Chemistry.

4 afternoons, either semester. (STILLMAN, LENOX.)

g. Urine Analysis.—Open to students who are taking or have completed course 7 and who have completed course *e*. [This course will be given in 1901-02.]

3 or 4 afternoons, 1st semester, in alternate years. (LENOX.)

h. Toxicology.—Open to students who are taking or have completed course 9 and who have completed course *e*. [This course will not be given in 1901-02.]

4 afternoons, 1st semester, in alternate years. (LENOX.)

i. Special Methods in Mineral Analysis.—Chiefly volumetric, including iron and steel analysis. Open to students who have completed course *f*.

4 afternoons, 2d semester. (LENOX.)

j. Sugar Analysis.—Methods of analysis used in sugar manufacture and refining. Open to students who have completed course *e*. *3 or 4 afternoons, 1st semester.* (STILLMAN.)

k. Organic Analysis.—Open to students who have completed courses *d* and *e*.

2 afternoons, either semester. (RICHARDSON.)

l. Assaying.—Open to students who have completed course *e*.

2 afternoons, either semester. (LENOX, HESS.)

***m. Physical-Chemical Measurements.**—Exercises in the practice of physical-chemical laboratory methods. Open to students who have completed or are taking course 11, and have completed course *f*.

3 or 5 hrs., either semester. (YOUNG.)

***n. Physical-Chemical Research.**—Special problems for original investigation in the field of Physical Chemistry. Open to students who have completed course *m*.

Hours to be arranged. (YOUNG.)

***o. Water Analysis.**—(Sanitary or boiler-feed.) Open to students who have completed course *e*.

3 afternoons, 2d semester. (STILLMAN.)

Candidates for the degree of Bachelor of Arts in Chemistry will be required to complete courses 1, 2, 3, 13, *a*, *b*, *d*, *e*, and f in Chemistry, course 1 in Physics, courses 1 and 2 in German. Students who are candidates for A. B. in Chemistry, but are

*Will be given in 1901-02 only in case the new laboratory is ready for occupation.

looking forward to Medicine or Pharmacy as a career, are permitted to substitute Physiology 1 for Physics 1 when it is not practicable for them to take both, and to substitute Urine Analysis or Toxicology for course *f*.

III. CHEMICAL ENGINEERING

In recognition of an increasing field of activity for men qualified to occupy positions as superintendents and managers of manufacturing enterprises involving chemical processes, it has been arranged, in co-operation with the departments of Civil Engineering and Mechanical Engineering, to offer students the opportunity to obtain such training as will best qualify them for such positions. Experience shows the great advantage in these positions of fundamental training in principles of construction, strength of materials, steam engineering, machine designing, combined with thorough chemical training.

The degree of Engineer in Chemical Engineering will be conferred upon the completion of the following courses; Chemistry, 1, *a*, 2, 3, 4, 13, *b*, *d*, *e*, *f*; German, 1, 2; Physics, 1, 2; Applied Mathematics, 1, 2, 3, 5, and 6; Civil Engineering, 1, 2, 3*a*; Mechanical Engineering, 2, 3, 4, 5, 7, and 8; thesis work.

It is estimated that students entering the University with that intention will be able to take the degree in one year after the baccalaureate degree. Students pursuing this course will be given the degree of Bachelor of Arts in Chemistry at the end of four years.

Laboratory Fees

A charge of twenty-five dollars per semester will be made to students in all laboratory courses. Of these charges five dollars per semester in assaying, and ten dollars per semester in the other courses, is returnable, less bills for breakage and loss of apparatus.

BOTANY

GENERAL BOTANY

Douglas Houghton Campbell, Ph. D., Professor of Botany.

George James Peirce, Ph. D., Associate Professor of Botany and Plant Physiology.

————————, Assistant in Botany.

1. Elementary Botany.—Study of representatives of the principal groups of plants, with lectures upon special morphology

and classification. (Campbell's Elements of Structural and Systematic Botany.) The aim of this course is to give the student a grounding in the principles of plant structure and classification, derived from a careful study in the laboratory of selected types, supplemented by such explanatory lectures as may be deemed necessary. *3 hrs., both semesters.* (CAMPBELL, PEIRCE.)

2. Algæ.—Lectures, reading, and laboratory work upon the special morphology and classification of the Algæ.
5 hrs., 1st semester. (CAMPBELL.)

3. Archegoniatæ.—Special morphology and classification of the Archegoniatæ. Continuation of course 2.
5 hrs., 2d semester. (CAMPBELL.)

4. Physiology.—Laboratory work, lectures, and reading on Respiration and Nutrition.
3 hrs., 1st semester. (PEIRCE.)

5. Elementary Bacteriology.—Laboratory work, lectures, and reading. *3 hrs., 1st semester.* (PEIRCE.)

6. The Evolution of Plant Forms.—Lectures. Open to all except first year students.
1 hr., 2d semester. (CAMPBELL.)

7. Physiological Anatomy.—Laboratory work and lectures on the cells and tissues, especially of vascular plants.
3 hrs., 2d semester. (PEIRCE.)

[Course 7 is desirable, but is not required, as preliminary to course 4 (see above)].

8. Physiology.—Laboratory work, lectures, and reading on Growth, Irritability, and Reproduction.
3 hrs., 2d semester. (PEIRCE.)

9. Advanced Work in Morphology and Physiology.—Intended especially for graduate students.
(CAMPBELL, PEIRCE.)

Course 1 must precede all other courses, except course 6, and students making the subject a major must complete courses 1 to 4 inclusive, courses 2 and 3 in Systematic Botany, and also course 1 in Zoology, before graduation. Course 9 is intended especially for graduate students, and opportunities will be given such students for carrying on special lines of work upon original problems.

Laboratory Fees

Ten dollars for course 5; five dollars for courses 4 and 8; three dollars per semester for each of the other laboratory courses.

SYSTEMATIC BOTANY AND ECOLOGY

William Russell Dudley, M. S., Professor of Botany.
Le Roy Abrams, A. B., Laboratory Assistant in Botany.
Adolph Daniel Edward Elmer, B. S., Herbarium Assistant.

Instruction in this Department chiefly relates to the Spermaphytes, their structure, affinities, and geographic distribution. The advanced work on the Fungi will also be given under its direction.

Course 1 or its equivalent and the Algae and Archigoniatæ in General Botany, courses 1 and 11 in Zoology, and course 1 in Geology are required of students intending to graduate with Systematic Botany as a major study. Course 1 is also required as a basis for courses 2, 4, and 6. An elementary knowledge of the structure of the flowering plants only is required to enter courses 3 and 5.

[**1. Elementary Botany.**—A study of plant types, etc. This is course 1 under General Botany.]

2. The Fungi.—The laboratory work (three hours) will be devoted to morphology, development, and culture methods; the lectures to systematic relationships, with an account of economically important forms.

5 hrs., 1st semester. (Dudley, Abrams.)

3. Spermaphyta.—The morphology, histology, and affinities of the principal orders of flowering plants represented on the Pacific Slope will be studied, and an acquaintance made with typical forms through dissection and drawing.

4 hrs., 2d semester. (Dudley, Abrams.)

[**4. The Algæ and Archegoniatæ.**—Courses 2 and 3 under General Botany.]

5. Geographical Distribution and Forest Botany.—Lectures on the orders containing trees and shrubs and on the general principles of geographical distribution which they illustrate. Laboratory work, also preparation of herbarium specimens of woody plants, native and exotic.

2 hrs., 2d semester. (Dudley, Abrams.)

6. The Compositæ.—A study of representatives of the tribes of Compositæ, with reference to the general principles of classification. *2 or more hrs., 1st semester.* (DUDLEY.)

7. Advanced Work.—Advanced or special study, chiefly for seniors in the department. It is planned to meet the needs of each individual, and to promote habits of independent work. *3 or more hrs., each semester.* (DUDLEY.)

8. Graduate Work.—This includes investigation on a special subject in the Spermaphyta or Fungi, which may be either a systematic or a biolgoical study. It is supplemented by reading, and a study of methods in bibliography.

Several carefully planned excursions in the second semester, through the zones of trees and chaparral in the adjacent mountains, are made the subjects of written reports by the students.

The Department has begun a series of observations and records designed to correlate the facts of plant distribution with those of the extraordinary variation in temperature, rainfall, and soil in the Santa Cruz mountain peninsula. The almost complete isolation of this tract by water and broad treeless valleys, and its range of elevation from sea level to 3800 feet (Loma Prieta), give additional value to it as a region for ecological studies relative to the development and preservation of the remarkable Coast Range flora.

The Herbarium consists of about 12,000 mounted sheets, largely of plants collected in Western America, and includes, besides purchases, considerable donations from the California Academy of Sciences, the Government, and J. W. Congdon of Mariposa. Gifts of herbarium specimens of trees and shrubs are especially desired, and will be named for collectors. The considerable private collections of flowering plants and fungi belonging to the head of the department are in constant use.

Laboratory Fees

Laboratory fees for courses 5 and 6, two dollars; for the other courses, three dollars.

HYGIENE AND ORGANIC TRAINING

Thomas Denison Wood, A. M., M. D., Professor of Hygiene and Organic Training.

Thomas Andrew Storey, A. M., Instructor in Hygiene and Organic Training.

Maud March, Instructor in Hygiene and Organic Training.

William Freeman Snow, A. M., M. D., Instructor in Hygiene and Organic Training.

Vera Townsend, Herbert William Chappell, Charles Abraham Cantwell, Frank Hinman, Gifford Lyne Sobey, Walter Morten Boston, A. B., Florence Bolton, and Kathryn Romer Kip, Assistants in the Gymnasium.

The aims of this Department are: (1) To provide general and special instruction in matters pertaining to the improvement and preservation of health; (2) To furnish the student, through facilities and instruction in the Gymnasium and elsewhere, opportunity for general organic development; (3) To provide a thorough training for those who wish to prepare themselves for teaching in this branch of education.

For the gymnastic training of students there are two buildings, Roble Gymnasium for the young women, and Encina Gymnasium for the young men. Both are temporary frame buildings, but are substantially built and equipped with suitable apparatus.

Good facilities for athletics have been provided. These include tennis courts, a quarter-mile track, and areas for basket-ball, base-ball, football, and field sports.

All students are entitled to anthropometric and medical examination. The information furnished by measurement and examination gives the basis for advice to the student as to the hygienic regimen most conducive to health and development. Exercises are prescribed for the individual, first for the correction of special weakness, and then for rational and symmetrical development. The regular gymnastic work is under the constant supervision of the instructors.

Facilities are provided for the examination of sight and hearing. The purpose of these tests is to determine whether the special sense organs are normal. If the condition is abnormal and serious enough to demand further attention, the student is referred to a specialist.

1. Gymnastic Exercises.—Individual and class work, with and without apparatus. Open to all students, under the advice

of the instructors. One hour of credit will be given for systematic prescribed exercises, the three exercises a week to be taken on separate days arranged according to the work of the student. (Three exercise hours a week.) *1 hr., both semesters.*

(Storey, March, Townsend, Chappell, Cantwell, Hinman, Sobey, Boston.)

2. Personal Hygiene.—Open to all students. Lectures and demonstrations designed to give the student practical knowledge of matters relating to the individual care of the body, the improvement of health, prevention of disease, and treatment in emergencies.

2 hrs., either semester. (Wood, Snow, March.)

3. Sanitation.—Open to students who have completed course 2. Course 3 will take up the study of public health, general hygiene, and sanitary science. Students will prepare papers upon assigned topics. *2 hrs., 2d semester.* (Wood.)

4. School Hygiene.—Open to those who are preparing to teach. A study of the child organism, special hygiene of childhood and adolescence, physiology and hygiene of the nervous system, health condition of schools and hygiene of instruction, diseases caused or favored by school life and their prevention.

2 hrs., 1st semester. (Wood.)

5. Hygiene of Sex.—Open to advanced students by special permission. *1 hr., both semesters.* (Wood.)

The following courses, in addition to courses 2, 3, and 4, are recommended for candidates for graduation in Hygiene and Organic Training, and for special students in this Department.

[**6. General Anatomy and Physiology** (Course 1 in Physiology); or **Elementary Zoology** (Course 1 in Zoology).]

[**7. Animal Physiology**—(Course 2 in Physiology).]

[**8. Organic Evolution**—(Course 15 in Zoology).]

9. Applied Anatomy and Physiology of the Sense Organs.—A study of the principles governing the use of instruments employed in the examination of the eye, ear, nose, and throat. The course is intended to give a practical knowledge of these instruments, and to offer a preparation for the investigation of practical problems dependent upon the physiology of these organs. Open to students who have had course 3 in physiology, or by

special permission. One demonstration and two laboratory periods a week. Students may register for a thesis upon some selected problem. *2 or 3 hrs., 2d semester.* (Snow.)

10. Applied Physiology and Psycho-Physics.—[See course 16 in Education.] Two demonstrations and one laboratory period. Open to students in this Department by special permission.

3 hrs., 2d semester. (Snow, Starbuck.)

11. Kinesiology.

a. "Anatomy of Exercise."

3 hrs., 1st semester. (Storey.)

b. Physiology of Exercise.

2 hrs., 2d semester. (Storey.)

12. Special Gymnastic Training.—A study of bones, joints, and muscles in relation to exercise. (Five exercise hours a week.)

2 hrs., both semesters.

(Storey, March, Townsend, Chappell, Cantwell, Hinman, Sobey, Boston.)

13. Anthropometry.—Instruction in methods of examinaing, measuring, and testing the body, tabulation and charting of statistics and Photography. (One lecture and three laboratory hours a week.)

2 hrs., 2d semester. (Wood, Storey, March, Snow.)

14. Journal Club.—A study will be made of the current literature in Physical Education and Hygiene. Required of advanced students in the department.

(Wood, Storey, March.)

15. Special Courses.—Special courses of study are laid out for advanced students according to the qualifications of each individual. Such courses include the study of topics related to Hygiene, Sanitation, and Gymnastics; investigations in Anthropometry, diagnosis, special tests, and specific effects of various kinds of activity upon the different structures and functions of the human organism.

PHYSIOLOGY AND HISTOLOGY

Oliver Peebles Jenkins, Ph. D., Professor of Physiology and Histology.

Frank Mace McFarland, Ph. D., Associate Professor of Histology.

Ray Lyman Wilbur, A. M., M. D., Assistant Professor of Physiology.

Clara S. Stoltenberg, A. M., Instructor in Physiology.

Anton Julius Carlson, Alvin Walter Baird, William Henry Sloan, and Philip Kingsnorth Gilman, Assistants in Physiology.

UNDERGRADUATE COURSES

1. General Anatomy and Physiology.—This course is designed to give a general view of the laws of the structure and the activities of organisms. The work will give occasion to discuss many questions of General Biology. It consists of: first, the study of the cell and its activities as shown in the unicellular organisms, in reproductive cells, and in individual cells of many tissues; second, the study of the laws and course of development resulting in higher differentiations in structure, and specializations in function, exhibited in a selected series of organisms, both animals and plants, of increasing complexity; third, the comparative study of the physiological processes of forms placed under widely different conditions. The latter part of the course is occupied with an introduction to the embryology, anatomy, and physiology of vertebrates. (One lecture and six laboratory hours a week.) *3 hrs., both semesters.*

(Jenkins, Stoltenberg, Wilbur.)

2. Physiology of Muscle, Blood, and Circulation.—To be preceded by course 1. An experimental course covering the ground represented in Foster's Physiology, Part I, or the American Text-Book on the same subjects. (One lecture and five laboratory hours per week.) *3 hrs., 1st semester.* (Wilbur.)

3. Physiology of Digestion, Respiration, Elimination of Wastes, Metabolism, and Nutrition.—Planned to follow course 2. An experimental course with Foster's Physiology, Part II, and the American Text-Book, as texts. (One lecture and five laboratory hours per week.)

3 hrs., 2d semester. (Wilbur.)

4. Structure of the Nervous System.—The course consists of the dissection and comparative study of a series of vertebrate brains, including the human brain and cord, also the peripheral nervous system, for which abundant material is provided, also such necessary helps as the latest models and charts. For texts the student will use Quain, Edinger and Barker. (One lecture and five laboratory hours per week.)

3 hrs, 1st semester. (STOLTENBERG.)

5. Histology of the Nervous System and Sense Organs.—The course includes also the anatomy of the sense organs. It is planned to accompany course 4, the two being designed to give the gross and minute anatomy of the central and peripheral nervous system and sense organs. The text necessary for the student's use is Quain. (One lecture and five laboratory hours per week.) *3 hrs., 1st semester.* (STOLTENBERG.)

6. Physiology of the Nervous System and Sense Organs.—An experimental course in these subjects, designed to follow courses 4 and 5. Texts, Foster, American Text-book. (One lecture and five laboratory hours per week.)

3 hrs., 2d semester. (JENKINS, STOLTENBERG.)

7. Structure and Physiology of the Blood.—Advanced courses open only to those who have completed courses 1, 2, 3, 4, 5, and 6. They consist of laboratory work with occasional lectures. *a* and *b* may be taken independently.

a. Structure and Composition of the Blood.

3 hrs., 1st semester. (WILBUR.)

b. Physiology of the Circulation.

3 hrs., 2d semester. (WILBUR.)

8. Special Courses in Physiology.— Advanced courses open only to those who have had courses 1, 2, 3, 4, 5, and 6. They are arranged for the advanced study of selected subjects in physiology, or as a drill in the methods of research. The work will be planned for the individual student, the time varying with the exigencies of the case. *2 to 5 hrs., both semesters.* (JENKINS.)

9. Histology.—This course includes both the study of the tissues in a comparative way, and the history of their development, also the minute anatomy of organs except those of the nervous system and senses. [See courses 4 and 5.] It also gives a drill in histological technique. Open to those who have taken course 1, or its equivalent. Students with Physiology as their

major are advised to take courses 2, 3, and 9 together. (One lecture and six laboratory hours a week.)

3 hrs., both semesters. (McFarland.)

10. Histogenesis.—A course in advanced Histology for students who have completed courses 1 and 9, and in addition the first semester of Vertebrate Embryology (Zoology 6). It comprises the comparative study of the histogenesis of the fundamental vertebrate tissues and organs. (One lecture per week, minumum laboratory work six hours per week.)

3 hrs., 1st semester. (McFarland.)

11. Neurocytology.—A comparative study of the minute structure of the nerve cell and nerve fibre, the neurone theory, and the question of functional alterations of structure during normal activity and artificial stimulation. (One lecture and at least six laboratory hours per week.) Open to advanced students.

3 to 5 hrs., 2d semester. (McFarland.)

12. Cellular Biology.—A course in Cytology dealing with the structure and functions of the cell, with especial reference to the reproductive processes in unicellular and multicellular organisms, and the theories connected therewith. Open to advanced students. (Two lectures per week, with demonstrations and laboratory work.) *2 hrs., 2d semester.* (McFarland.)

13. Anatomy.—This course consists of twelve weeks study of human osteology, with a brief comparative study of skeletons of vertebrates. The remaining six weeks is given to mammalian myology, angeology, and splanchnology (dog, cat, rabbit). [For anatomy of nervous system and sense organs, see courses 4 and 5.]

3 to 5 hrs., 2d semester. (Wilbur.)

14. General Physiology.—A course for advanced students in the experimental study of the more recent investigations in General Physiology; as presented in the following texts: The Cell, Hertwig; General Physiology, Verworn; and Experimental Morphology, Davenport. It is designed also that the course will furnish means of drill in research in the lines studied. Open to those who have had courses 1, 2, 3, and 9. (Conference once a week, minimum laboratory work five hours per week.)

3 hrs., both semesters. (Jenkins.)

15. Journal Club.—Students in the advanced classes will be expected to meet once a week to discuss current literature in Physiology and Histology. *1 hr., both semesters.*

16. Seminary in Physiology and Histology.—Open to graduate students. *2 hrs., both semesters.*

17. Research in Histology.

Hours to be determined, both semesters.

(McFarland.)

18. Research in Physiology.

Hours to be determined, both semesters.

(Jenkins.)

Candidates for the Bachelor's degree who select Physiology and Histology as a major, will be expected to take courses 1, 2, 3, 4, 5, 6, 9, and 15, and at least five hours to be made up from the other courses offered; and in addition courses 1 and *a* in Chemistry, 1 and 2 in Physics, and the first semester in Embryology (course 6 in Zoology.)

Laboratory unit of credit.—In those courses in which definite laboratory time is not fixed, three hours laboratory work are taken as the equivalent of one hour's credit.

Laboratory Fees

Seven dollars per semester, except for course 1, in which the fee is five dollars per semester.

GRADUATE COURSES

The graduate work of the Department is included in the courses numbered: 7, 8, 10, 11, 12, 14, 15, 16, 17, and 18. Undergraduate students may elect such of these courses as they are prepared to take, but credit recorded in undergraduate standing will not count toward a higher degree. The details of the work of a graduate student will be planned for each individual, and will naturally depend on the aim sought by him and upon his previous training. Candidates for the higher degrees will be expected to include in their work attendance on the Journal Club and Seminary, the selection of certain of the courses given above, and the accomplishment of some research. When it is desired to select a minor subject the choice of such minor will be guided by the needs of the candidate. The work leading to these degrees is of such a nature as to require a reading knowledge of German and French for its accomplishment.

PREPARATION FOR THE STUDY OF MEDICINE

Students intending to enter on the study of medicine, are advised to take Physiology and Histology as a major subject, with

Chemistry, Physics, Comparative Anatomy of the Vertebrates, and Hygiene among the collateral subjects. Such a course gives that foundation both in scientific knowledge and in skill in experimental Physiology, and in Histological and Anatomical technique, which will make it possible to accomplish the medical course of the best medical schools in a shorter time and with greater advantage.

ZOOLOGY

Charles Henry Gilbert, Ph. D., Professor of Zoology.
Vernon Lyman Kellogg, M. S., Professor of Entomology.
George Clinton Price, Ph. D., Associate Professor of Zoology.
Harold Heath, Ph. D., Assistant Professor of Zoology.
John O. Snyder, A. M., Instructor in Zoology.
Robert Evans Snodgrass, A. B., Instructor in Entomology.
David Starr Jordan, LL. D., Lecturer on Organic Evolution.

GENERAL ZOOLOGY

1. Elementary Zoology.—A laboratory course involving the study of representatives of the principal groups of animals, together with lectures on their structure and classification, and on the general laws of biology which they illustrate.

3 hrs., both semesters. (Heath.)

2. The Invertebrates.—This course, following the first year's work, is designed to give the student a broader knowledge of the morphology and relationships of the more important invertebrate groups. The main features of development, including the morphology of larval forms, will receive attention.

3 hrs., both semesters. (Heath.)

3. Advanced Work on Invertebrates.—The original investigation of problems connected with the anatomy, embryology, or classification of invertebrates.

2 to 5 hrs., both semesters. (Heath.)

4. The Vertebrates.—A general course in the classification of vertebrate animals, with studies in the habits and the geographical distribution of species. The course will include field excursions and a study of the methods of collecting and preserving specimens. *2 hrs., both semesters.* (Gilbert, Snyder.)

5. Comparative Anatomy of the Vertebrates.—A more detailed examination of vertebrate morphology, including dissection of representatives of the several classes of vertebrates, with comparative studies in vertebrate osteology, the nervous and circulatory systems, etc. *3 hrs., both semesters.* (PRICE.)

6. Vertebrate Embryology.—During the first semester, the development of the chick; for the second semester, the shark, salamander, and mammal. *3 hrs., both semesters.* (PRICE.)

7. Advanced Embryology.—The work during the first semester will consist of a detailed study of the development of the nervous system, the urinogenital, or some other important system of organs. During the second semester, each student will be given some special problem, usually in the line of the verification of some piece of original work.

2 hrs., both semesters. (PRICE.)

8. Ichthyology.—A course of lectures and laboratory work, including an examination of the larger groups of fishes, with special reference to the characters on which they are based, and including practical work in the discrimination of species.

2 to 5 hrs., both semesters. (GILBERT.)

9. Advanced Ichthyology.—Special problems in the morphology and classification of fishes will be set for advanced students prepared for such work.

2 to 5 hrs., both semesters. (GILBERT.)

10. Course in Zoological Reading.

2 hrs., both semesters. (GILBERT.)

ENTOMOLOGY

11. Elementary Entomology.—The elementary study of insect structure, metamorphosis, habits, and classification, including practice in collecting and preserving specimens.

3 hrs., 1st semester. (KELLOGG, SNODGRASS.)

12. Morphology, Development, and Ecology of Insects.—Continuation of the preceding course, including insect development, comparative morphology, and ecology.

3 hrs., 2d semester. (KELLOGG, SNODGRASS.)

13. General Entomology.—A course of lectures and demonstrations. [Not given in 1901-02.]

2 hrs., 2d semester. (KELLOGG.)

14. Advanced Work.—Advanced study and investigation of the biology of insects. Laboratory and field work.

2 to 5 hrs., both semesters. (KELLOGG.)

BIONOMICS

15. Organic Evolution.—Lectures on the laws or principles of biology and the factors in organic evolution. Assigned reading. Not open to first year students.

2 hrs., both semesters. (JORDAN, KELLOGG.)

The *Zoological Club* meets bi-weekly to discuss and record the original observations of its members. Field excursions are frequently taken, and a zoological exploration of the vicinity of Palo Alto is in progress.

Course 1 or its equivalent must precede all laboratory courses, and course 11 is required of all major students in general Zoology. These must obtain before graduation at least forty hours' credit in biological subjects, selected from course 1 to 11 in Zoology, course 2 in Physiology, and course 1 in Botany.

Students wishing to give special attention to Entomology will include courses 11, 12, 13, and 14 in their major work. Course 1 of general Zoology must precede any laboratory course in Entomology.

Work for graduate and special students will be laid out in accordance with their individual needs and preferences.

THE ZOOLOGICAL COLLECTIONS

The *Zoological Museum* contains a very full representation of the fishes of North America, and includes among others a valuable series of the deep-water fishes of the Pacific, and large collections from the West Indies, the Hawaiian Islands, Bering Sea, Japan, the coasts of Mexico and Central America, and the Galapagos Islands. The museum contains also a large representation of the reptiles, batrachians, birds, and mammals of California and adjoining States. The development of the museum has been due very largely to the co-operation of Mr. Timothy Hopkins.

Material illustrating the principal groups of invertebrates is ample for class instruction.

The *Entomological Collections* contain authoritatively determined specimens, accessible for comparison, in all of the insect orders, and include many sets of specimens illustrating the development and habits of insects. There is included, also, the

most important existing collection of North American Mallophaga, comprising the types of four-fifths of all the species in the order so far described from North America, an unusually large collection of Coccidæ (scale insects), and a valuable series of specimens from the Galapagos Islands.

Laboratory Fees

Course 1, five dollars per semester; all other laboratory courses, three dollars each per semester.

GEOLOGY AND MINING

JOHN CASPER BRANNER, Ph. D., Professor of Geology.

JAMES PERRIN SMITH, Ph. D., Professor of Mineralogy and Paleontology.

JOHN FLESHER NEWSOM, A. M., Assistant Professor of Mining and Metallurgy.

MILNOR ROBERTS, A. B., Assistant in Blowpipe Analysis.

RALPH ARNOLD, A. M., Assistant in Geology.

1. Dynamic and Structural Geology. — Lectures, with syllabus. *3 hrs., 1st semester.* (BRANNER.)

2. Economic Geology.—Lectures with syllabus. Open to students who have completed course 1.

2 hrs., 2d semester. (BRANNER.)

3. Topographic Geology.—Field and laboratory work, with the construction of geologic maps, models, and sections. Open to students who have completed course 1 in Geology, and course 4 in Civil Engineering.

1 to 5 hrs., both semesters. (NEWSOM, ARNOLD.)

4. Special Courses.—Special courses of instruction and training are laid out for advanced and special students according to the needs and qualifications of each individual. Special investigations are taken up by advanced students as rapidly as it is possible for them to undertake such work advantageously.

1 to 5 hrs., both semesters. (BRANNER, NEWSOM.)

5. Mineralogy.—*a.* Elementary Crystallography and Physical Mineralogy (first semester.) *b.* Blowpipe Analysis (second semester). Open to students who have had Elementary Chemistry.

2 hrs., both semesters. (J. P. SMITH, ROBERTS.)

6. Advanced Mineralogy and Petrography.—*a.* Mathematical, Physical, and Chemical Crystallography (first semester). *b.* Descriptive Mineralogy and Petrography, with special studies of the rock-forming minerals (second semester). Open to advanced students and graduates.

4 hrs., both semesters. (J. P. Smith.)

7. Paleontology.—*a.* Systematic Paleontology, or the history and character of organisms (first semester). *b.* Historical Geology, or the history and character of geologic formations (second semester). Open to students who have completed course 1.

4 hrs., both semesters. (J. P. Smith.)

8. Paleontology.—Original investigations of various problems in paleontology, especially of the distribution of faunas. This course will consist entirely of private work, in field and laboratory. Open to advanced students and graduates.

2 to 5 hrs., both semesters. (J. P. Smith.)

[**9. Assaying.**—Open to students who have completed course *e* in Chemistry and courses 1 and 2 in Geology. This course is the same as course *l* in the Department of Chemistry.]

2 afternoons, either semester. (Lenox, Hess.)

10. Mining.—Lectures on mining operations and methods, including prospecting, exploration, timbering, hoisting, drainage, and ore dressing. Open to those who have had courses 1, 2, and 5.

3 hrs., 1st semester. (Newsom.)

11. Metallurgy.—Lectures on Metallurgy, with special reference to the metallurgy of copper, lead, silver, and gold. Open to those who have had Geology 1, 2, and 5, and Chemistry 1, *a*, *b*, and 2. *3 hrs., 2d semester.* (Newsom.)

12. Mineralogy.—Original investigations in Mineralogy and Petrography. This course consists entirely of private work in field and laboratory. Open only to advanced students and graduates. *2 to 5 hrs., both semesters.* (J. P. Smith.)

[Courses in mining law, mine timbering, mine surveying, and the designing of mining machinery are also given; see Departments of Law, Civil Engineering, and Mechanical Engineering.]

Laboratory Fees

Five dollars for the second semester in course 5.

CIVIL ENGINEERING

Charles David Marx, C. E., Professor of Civil Engineering.

Charles Benjamin Wing, C. E., Professor of Structural Engineering.

Leander Miller Hoskins, C. E., Professor of Applied Mathematics.

John Charles Lounsbury Fish, C. E., Associate Professor of Civil Engineering.

Students intending to make Civil Engineering a major are advised, though not required, to present among their entrance subjects, advanced algebra, solid geometry, trigonometry, physics, drawing, and French or German. Special students should have completed English, elementary algebra, and plane geometry.

I. GENERAL WORK

Linear Drawing and Descriptive Geometry

1a. Linear Drawing and Lettering.—(Drafting six hours a week, September and October.) Course 1*a* is open to all students, and is required of students in Engineering. (The instruments and materials for this course cost about fifteen dollars.)

1 hr., 1st semester. (Fish.)

1b. Descriptive Geometry.—Including shades, shadows, and perspective. (Lectures and recitations, two hours a week, drafting, six hours; November to May.) Course 1*b* is open to students who have completed solid geometry and 1*a*, and is required of students in Engineering.

2 hrs., 1st semester; 4 hrs., 2d semester. (Fish.)

Applied Mechanics

2. Applied Mechanics.

a. Mechanics of Materials.—Under this head are treated the theory of the strength and elastic properties of the ordinary materials of engineering construction. The main subjects covered are simple tension, compression, and shear; theory of flexure, with applications to simple and continuous beams; theory of long columns; torsion and shafts; repeated stress; sudden stress and resilience. (Lectures and recitations three hours a week.)

b. Testing of Materials.—Each student is required to make a series of experiments, testing the strength and elastic properties of wrought iron, cast iron, steel, and timber. A careful record of all experiments is required of every student. (Laboratory work,

six hours a week.) Open to students who have taken course 1 in Applied Mathematics; required of all students in Engineering.
5 hrs., 1st semester. (WING.)

3. Hydraulics.

a. Hydrostatics and Hydraulics.—This course treats of fluid pressure, the principles of fluid equilibrium, and the laws governing the flow of water through orifices, over weirs, in closed conduits, and in open channels. Open to students who have completed course 5 in Applied Mathematics.
3 hrs., 2d semester. (HOSKINS.)

b. Hydraulic Motors.—A discussion of the theory of the main types of turbines, including centrifugal pumps. A few lectures on the general theory of energy and on relative motion are given as an introduction to the course. Open to students who have completed course 3*a*. *3 hrs., 1st semester.* (HOSKINS.)

II. SPECIAL WORK

Topographic and Geodetic Engineering

4a. Elementary Surveying.—Instruments; methods of surveying; topographical mapping and sketching. (Lectures and recitations, two hours; drafting and field work, nine hours.) Open to students who have completed courses 1, 2, 3, and 4, in Applied Mathematics, and 1*a* in Civil Engineering; required of all students in Civil Engineering and Topographic Geology.
5 hrs., 1st semester. (FISH.)

4b. Elementary Surveying.—An abridgment of course 4*a*, intended for students in Mechanical and Electrical Engineering. (Field work and drafting, six hours per week.) Open to students who have completed courses 1, 2, 3, and 4, in Applied Mathematics, and 1*a* in Civil Engineering.
2 hrs., 1st semester. (FISH.)

5a. Geodesy.—The adjustment of observations. Lectures. Open to students who have completed courses 1, 2, 3, 4, and 5, in Applied Mathematics. [Course 5*a* will not be given in 1901-02.]
2 hrs., 1st semester. (FISH.)

5b Geodesy.—Methods of base line and angle measurements, geodetic leveling, and map projections. (Lectures, two hours; computations and drafting, three hours.) Open to students who have completed courses 4*a* and 5*a*. [Course 5*b* will not be given in 1901-02.] *3 hrs., 2d semester.* (FISH.)

Railroad Engineering

6a. Railroad Surveying.—(Lectures, two hours; drafting and field work, nine hours per week.) Open to students who have completed course 4*a*. Required of students in Civil Engineering.

5 hrs., 2d semester. (FISH.)

6b. Railroad Construction.—(Computations and drafting, six hours per week.) Open to students who have completed course 6*a*, and who are taking or have taken course 8*a*.

2 hrs., 1st semester. (FISH.)

6c. Railroad Location.—(Lectures and computations, two hours per week.) Open to students who have completed course 6*b*.

2d hrs., 2d semester. (FISH.)

7. Railroad Operation and Management.—Lectures and recitations. [Course 7 will not be given in 1901-02.]

3 hrs., 1st semester.

It is the intention to offer ultimately a special course in Railroad Engineering in connection with the Department of Economics. The collection of Railroad books in the Hopkins Library offers exceptional opportunities for research in this line.

Structural Engineering

8a. Elements of Design.

1. Mechanics of Structures.—Course 6 in Applied Mathematics is extended to the determination of stresses in simple trusses, both graphically and analytically. (Drafting room, nine hours a week first half of semester.)

2. Theory of Structural Details.—Course 2 is extended to an investigation of the distribution of stresses in structural details. Wooden joints, riveted joints, pin-connected joints, and masonry details are taken up in order. (Drafting room, nine hours a week last half of semester.) Open to students who have taken course 1, and who have taken or are taking course 2. Required of all students in Civil Engineering.

3 hrs., 1st semester. (WING.)

8b. Elements of Design.

1. Materials.—Including a study of structural materials, other than metals, from an engineering standpoint. Wood, stone, brick, limes, cements, etc., are considered in order. (Lectures two hours a week first half of semester.)

2. Foundations.—Under this head are considered the bearing power of soils, strength of piles, distribution of pressures, and similar details connected with the design of simple foundations. (Lectures two hours a week last half of semester.)

3. Design.—The work of the first semester is used as a basis for making a complete design, including working drawings, bills of material, and estimate of cost, of some simple structure, such as a mill building or highway bridge. (Drafting room, nine hours a week first half of semester; three hours a week last half of semester.

4. Testing.—Extending the work of course 2*b*. Each student is required to make a series of experiments, testing the physical properties of brick, stone, and cement. (Laboratory six hours a week last half of semester.) Open to students who have completed course 8*a* and course 3 in Mechanical Engineering; required of all students in Civil Engineering.

5 hrs., 2d semester. (WING.)

8c. Elements of Design.—Courses 8*a* and 8*b* abridged to meet the requirements of students taking Mining, Mechanical, or Electrical Engineering as a major. Special applications are made to hoisting and conveying structures, mill buildings, and central station buildings. (Drafting room, six or nine hours, either or both semesters.) Open to students who have taken course 1, who have taken or are taking course 2, and who have taken or are taking course 10 in Geology, or course 5 in Electrical Engineering.

2 or 3 hrs., either or both semesters. (WING.)

9. Railway Bridges.—This course comprises the determination of the stresses in modern types of railroad bridges, including cantilever and swing, spans, masonry arches, and arch ribs; the discussion of the most economical types, spans, and dimensions of bridges and bridge members; the study of the methods of constructing sub-aqueous foundations, shop methods, erection, inspection of material, specifications, and other factors influencing the design of bridges. Designs of sub- and super-structure are made by each student to fulfill actual conditions, the parts proportioned, and bills of material prepared. Open to students who have completed course 8*a*.

5 hrs., both semesters. (WING.)

Hydraulic Engineering

12. Water Supply Engineering for Towns and Districts.—Sources of supply. Collecting and storing of water, either for

water supply of towns or for irrigation purposes. Settling, filtering, conducting, and delivering of water, including the study and design of all accessory works. (Three hours lectures and recitations, six hours drafting.) Open to students who have completed courses 2, 3, 4*a*, and 8*a*; required of all students who take their major in Hydraulic Engineering.

5 hrs., 1st semester. (MARX.)

13. Sanitary Engineering.—Including sewerage of towns and drainage of lands. Special attention will be given to the study of all municipal sanitary problems, such as removal of sewage, destruction of garbage, construction, maintenance, sweeping, and repairs of streets and pavements. (Three hours lectures and recitations, six hours drafting.) Open to students who have completed courses 2, 3, 4*a*, 8*a*, and 12; required of all students who take their major in Hydraulic Engineering.

5 hrs., 2d semester. (MARX.)

15. Construction of Canals, River and Harbor Improvements.—Lectures and designing as per arrangement. Open to students who have completed courses 2*a*, 2*b*, 3, 4*a*, and 8*a*.

2 hrs., both semesters. (MARX.)

16. Technical Seminary.—Study of German and French technical journals. Open only to fourth year students in Civil Engineering. *2 hrs., both semesters.* (MARX.)

MECHANICAL ENGINEERING

ALBERT WILLIAM SMITH, M. M. E., Professor of Mechanical Engineering.

GUIDO HUGO MARX, M. E., Associate Professor of Mechanical Engineering.

GEORGE FREDERICK MADDOCK, A. B., Instructor in Mechanical Engineering.

EUGENE JULIUS EMBRET PETERSON, Foreman of the Forge.

JOSEPH EUGENE SOULE, Foreman of the Woodworking Shop.

EUGENE ——, Foreman of Pattern Shop and Foundry.

The following courses in Mechanical Engineering are offered. The selection with these the student takes courses in mathematics, pure and applied mechanics, chemistry, physics, and

drawing, and may also elect such work from the general courses as time and preparation admit.

Students intending to make Mechanical Engineering a major are advised, though not required, to present among their entrance subjects, advanced algebra, solid geometry, trigonometry, physics, drawing, and French or German. Special students should have completed English, elementary algebra, and plane geometry.

1. Shop Work.

a. Woodworking.—(Three exercises a week, half year.)

b. Pattern Making—(Three exercises a week, half year.)

c. Forge Work.—(Three exercises a week, half year.)

d. Foundry Work.—(Three exercises a week, half year.)

e. Machine Shop Work.—(Three exercises a week, through the year.) [*e* of course 1 will not be given in 1901-02.]

Open to all students and required of students in Mechanical Engineering. Credit will not be given toward graduation for more than the indicated hours in any one of the divisions of course 1. *3 hrs., each semester.* (PETERSON, SOULE, ——.)

2. Elementary Machine Drawing.—This work consists of practice in making free-hand sketches of machine parts from which working drawings, tracings, and blue prints are developed. (Six hours a week in drawing room.) Open to students who have completed course 1*a* in Civil Engineering.

2 hrs., either semester. (G. H. MARX.)

3. Constructive Materials.—Study of the manufacture and physical qualities of iron, steel, and alloys. Intended to prepare the student for selection of these materials for machine parts. Open to students who have had elementary chemistry, and required of students in Mechanical Engineering.

2 hrs., 1st semester. (A. W. SMITH.)

4. Elementary Machine Design.—*a.* Function of machines; motion, force, and work in machines. (Three hours a week, lectures and recitations.) *b.* A drafting course applying the principles treated in *a.* (Six hours a week, drafting.) Open to students who have completed course 1*b*, in Civil Engineering, and required of students in Mechanical Engineering.

5 hrs., 2d semester. (G. H. MARX.)

5. Machine Design.—*a.* Study of machine elements, frames and supports. (Two hours a week, recitations and lectures, six

hours in the drafting room, first semester.) Open to students who have completed course 4, *a* and *b*, and who are taking course 2 in Civil Engineering; required of students in Mechanical Engineering. *b*. Proportion of stress members of machines, including steam engines and boilers. (Two hours a week, lectures and recitations, six hours in the drafting room, second semester.) Open to students who have completed courses 4 and 5*a*, and who are taking course 2 in Civil Engineering; required of students in Mechanical Engineering.

4 hrs., both semesters. (G. H. Marx.)

6. Advanced Machine Design.—A drafting course intended for fourth year students who have completed course 5.

2 hrs., both semesters. (G. H. Marx.)

7. Steam Engineering.—Mechanical theory of heat and its applications. Lectures and drafting. (Text-book: Ewing's Steam Engine.) Required of third year students in Mechanical Engineering. *3 hrs., both semesters.* (A. W. Smith.)

8. Steam Engineering.—Mechanical laboratory. Testing of engines and boilers, and experimental investigation of correlated problems. Open to students who have completed course 7, and required of students in Mechanical Engineering.

2 hrs., both semesters. (Maddock.)

9. Pumping Machinery.—A lecture course for fourth year students. Open to students who have taken course 7, first semester. *2 hrs., 2d semester.* (A. W. Smith.)

10. The Development and Transmission of Power.—A study of nature's available energy and its use in engineering. Special attention is paid to fuels and the financial efficiency of the prime movers and systems of power transmission. Lectures and written reports. Open to fourth year students.

2 hrs., 1st semester. (A. W. Smith.)

Shop and Laboratory Fees

Four dollars per semester in courses 1*a*, 1*b*, and 1*c*; two dollars per semester in course 8.

ELECTRICAL ENGINEERING

ALBERT WILLIAM SMITH, M. M. E., Professor of Mechanical Engineering (in charge of administration).

CLEMENT AUSTIN COPELAND, M. E., Associate Professor of Electrical Engineering.

ELMER ELSWORTH FARMER, E. E., Instructor in Electrical Engineering.

FRANK GEORGE BAUM, E. E., Instructor in Electrical Engineering.

During the four undergraduate years, leading to the degree of Bachelor of Arts, the student in Electrical Engineering pursues, in addition to the technical studies outlined below, the following courses; 1, 2, 3, 4, 5, and 6 in Applied Mathematics; 1, 2, 3, 4, 7, and 8 in Mechanical Engineering; 1*a*, 2*b*, 2*a*, and 3 in Civil Engineering; 1 and *a* in Chemistry; 1 and 2 in Physics. The student is at liberty to elect courses in other departments for which he may be prepared, and according to the time at his disposal.

Students intending to make Electrical Engineering their major subject should possess a special aptitude for mathematics and laboratory methods, and they are advised to present among their entrance subjects, advanced algebra, solid geometry, trigonometry, physics, drawing, and French or German. Special students should have completed English, elementary algebra, and plane geometry.

Attention is called to the fact that the first four years do not complete the course in Electrical Engineering, but that candidates for the degree of *Engineer* in Electrical Engineering are required to continue their course through a fifth year.

UNDERGRADUATE COURSES

1. Elementary Electrical Engineering.—A general elementary course. Three lectures and recitations, partly experimental, together with three hours laboratory work a week. Intended for all engineering students, and others who have completed courses 1, 2, 3, and 5 in Applied Mathematics and course 1 in Physics. It includes the elementary study of units of measurement, instruments, theory and design of the dynamo, the line and systems of distribution, transformers, motors, incandescent and arc lamps, electrometallurgy, etc. *4 hrs., 2d semester.* (FARMER.)

2. Theory.—General fundamental theory of Electrical Engineering. (Three lectures a week.)

3 hrs., 1st semester. (BAUM.)

3. Elementary Alternating Currents.—A course founded on the text of Bedell and Crehore. (Three lectures a week.)

3 hrs., 2d semester. (BAUM.)

4. Continuous Current Measurements.—Units of measurement and the theory of measuring instruments, bridge methods, galvanometers, ammeters, voltmeters, wattmeters, recording wattmeters, calibration of instruments, dynamo and motor testing, testing of cables and magnetic testing of iron, and photometry. Open to students completing course 1. (One lecture and six hours laboratory work per week.)

3 hrs., both semesters. (FARMER.)

5. Distribution.—Conductors, systems of distribution, calculation and design of distributing systems, the economic problem of electrical distribution, materials and methods of construction for lighting, railway, telephone, and telegraph lines. (Two hours lectures and recitations, and three hours drafting.) Open to students who have completed course 1, or courses 1 and 2 in Physics. *3 hrs., 1st semester.* (COPELAND.)

6. Dynamo Electric Machinery.—Theory and design of shunt, series and compound continuous current dynamos and motors. (Three lectures and recitations and three hours drafting.) Open to those who have completed course 5.

4 hrs., 2d semester. (FARMER.)

7. Central Station Design.—The economics, design, and management of central station systems; dynamos, switchboards, storage batteries, general arrangements, specifications, motors, lamps, meters, and transformers. (Two lectures and recitations.) Open to students having completed courses 2, 3, 4, 5, and 6.

2 hrs., both semesters. (COPELAND.)

8. Alternate Current Working.—Graphic problems. Steinmetz's treatment. Theory of the transformer alternate current dynamo design and theory. Polyphase systems and dynamos, measurement of power; synchronous, induction, and other motors, polyphase transformers, rotary converters, special apparatus. The advanced economic problem of the design of distributing systems.

4 hrs., both semesters. (COPELAND, BAUM.)

9. Alternate Current Measurements.—Engineering problems and experiments in alternate current working. (Six hours laboratory work a week.)

2 hrs., both semesters. (BAUM.)

10. Recent Applications.—A free discussion of the most recent investigations and applications in electrical engineering appearing in the current electrical journals of America and Europe.

1 hr., both semesters. (COPELAND.)

11. The Galvanometer.—Lectures and recitations.

1 hr., 1st semester. (FARMER.)

12. Transformer Design.—(Six hours drafting a week.)

2 hrs., 2d semester. (BAUM.)

In connection with course 7 it is aimed to have as many special lectures as possible. A series of tours is also taken during the second semester, when an extended study of practical installations in San Jose, San Francisco, and Oakland is made.

The Department acknowledges free copies of the following journals: *Electrical Engineering*, Chicago; *The Electrical World*, New York; *The Electrical Journal*, Chicago; *The Western Electrician*, Chicago; *The Journal of Electricity*, San Francisco; *The India Rubber World*, New York.

FIFTH YEAR COURSES

During the fifth year some of the following subjects will be studied, and one of them chosen for special attention.

14. Dynamo Machinery Design.—Advanced theory and practice of the mechanical and electrical design of direct and alternating current generators and motors.

14. Advanced Alternating Current Theory and Practice.—(Text: Steinmetz's Alternating Current Phenomena.)

(COPELAND.)

15. Telegraphy and Telephony.—The design and construction of telegraph and telephone lines, apparatus, and switch boards.

16. Special Applications for Electricity.—Apparatus for electric welding, mining, metallurgy; electrolysis in tanning, bleaching, purification of sewage, etc.

Laboratory Fees

Two dollars per semester in courses 1 and 9, and four dollars in course 4.

The University Library

HERBERT CHARLES NASH, Librarian.
ALEXIS VASILYEVICH BABINE, A. M., Associate Librarian.
ALFRED FRANCIS WILLIAM SCHMIDT., A. B., Classifier.
FLORENCE HUGHES, Cataloguer.
LOUISE MAXWELL, Assistant in Classification.
WESLEY HEMAN BEACH, A. B., ALPHA BUSHNELL, HAROLD TRADER, MARTHA ELIZABETH HAVEN, A. B., and JESSIE MARION BEACH, Library Assistants.

The THOMAS WELTON STANFORD LIBRARY BUILDING, a gift to the University from the Hon. Thomas Welton Stanford, of Melbourne, Australia, was occupied in January, 1900. The building is continuous with the Assembly Hall on the east, but separated from it by solid walls. The arcade is sixteen feet wide. The building has a frontage of one hundred and sixty feet and is one hundred and fifty-eight feet in width, including ell. The stack room which forms the ell is 70x74 feet. The main reading room, lighted by a circular dome of stained glass forty feet in diameter, has a seating capacity of two hundred and twenty. On the first floor are also the cataloguing rooms, the rooms for reference library and periodicals, and the offices of the librarian and associate librarian. On the second floor are six seminary rooms, each about 40x25 feet, occupied by the following department: The Classical Languages, the Modern Languages, English, Philosophy, Education, History, and Economics.

The Library now numbers fifty-two thousand volumes and twenty-two thousand pamphlets. The most notable gift to the Library has been the valuable collection of railway books presented by Mr. Timothy Hopkins, of San Francisco. This special collection is unusually rich in materials for the study of the early history of railways in Europe and America, and the donor has made generous provision for the maintenance and increase of the collection until it shall be practically complete. A catalogue of the Hopkins Railway Library has been published, thus greatly facilitating its use.

Another notable gift has been the collection of books and pamphlets relating to Australasia, presented to the Library by the Hon. Thomas Welton Stanford, of Melbourne, Australia. The University has also acquired the valuable library of the late Professor Hildebrand, of Leipzig, consisting mainly of works on Germanic philology.

In addition to the University Library, various large collections within reach can be made available to a greater or less extent. The Free Public, Mechanics Institute, Mercantile, and other libraries in San Francisco, can be used for reference. There are also at the University several large private libraries to which advanced students have access.

COURSE IN BIBLIOGRAPHY

General Bibliography.—The aim of this course is to give practical aid to students in the preparation of bibliographies. Bibliographical method, the bibliographies of special subjects, and the principal books of reference will be discussed and individual work carried out under direction in the University Library. *1 hr., 2d semester.* (BABINE.)

The Museum

HARRY C. PETERSON, Curator.

In 1880, Leland Stanford, Jr., then eleven years of age, accompanied his parents on a trip through Europe. During this journey he purchased and brought away with him mementoes of the various places visited—at first merely with the object of having a collection to recall the pleasures of his European trip. Later he became ambitious to add to and broaden his collection, and in 1883, on a second trip to Europe, he found opportunity to pursue systematically his archæological researches and acquisitions, with the idea of finally establishing a great museum. THE LELAND STANFORD JUNIOR MUSEUM was designed by Mrs. Stanford as a memorial to perpetuate this idea, and the large and valuable additions to the original collection are mainly her gift to the University.

The collection made by Leland Stanford, Jr., between 1880 and 1884, has been placed in two rooms (Rooms A and B), and his own arrangement reproduced. It is especially rich in Egyptian bronzes, Tanagra Figurines, Greek and Roman glass, mosaics, etc. The Memorial Room contains many personal mementoes of Senator Stanford, including the "Last Spike," racing trophies, Senatorial chair, etc. Here also is a large assortment of rare lace, India shawls, fans, and dresses, and many personal effects of General Grant.

The Cesnola collection contains five thousand pieces of Greek and Roman pottery and glass. The Egyptian collection comprises casts of statutary and bas reliefs, mummies, scrolls, scarabees, etc., collected by Brugsch Bey, Curator of the Gizeh Museum, and Libyan pottery of the date of 3000 B. C., excavated by Dr. F. Petree. It contains, besides, a collection of embroideries, the gift of Mr. Timothy Hopkins, which is made up of linen dating from the sixth to the twenty-first dynasty, and also Coptic embroidery. The Corean collection, the gift of Mr. Hopkins, contains costumes, household goods, cabinets, etc. Mr. Hopkins has also placed in the Museum a collection of ancient and modern coins and medals. The Chinese and Japanese collection comprises bronzes, arms,

china, lacquer, specimens of wood carving, cabinets, embroideries, musical instruments, etc., including the imperial bed-room set, a marvel of wood carving. The American collection is made up principally of mound relics, Indian baskets, utensils, Alaskan canoes, and totem poles. There is also a collection of stone implements from Copenhagen, Denmark.

The fine arts collections have been made mainly by Mrs. Stanford. At the present time there are nearly five hundred paintings in the museum, including pictures by Meissonier, Bouvier, Bonnat, Richter, Carolus-Duran, Van Dyck, Bierstadt, Ch. Landelle, Keith, and others. The ceramics collected by Mrs. Stanford are especially noteworthy. The Anna Lathrop Hewes collection of paintings, statuary, mosaic, etc., and a collection of pictures in oil and water colors presented by the Hon. Thomas Welton Stanford, of Australia, are also noteworthy.

In the Natural History room, in the north wing, there is a large collection of birds' eggs and skins, donated by the late Thomas Flint, of San Francisco. With them, is a collection of mounted mammals, the most important being a series of the fur seals of the Pribilof Islands, presented by President Jordan.

An historical collection of early California paintings and etchings is now being made, the two large paintings by Charles Nahl, formerly hanging in the Capitol at Sacramento, being late additions. The Stock Farm Historical Collection will also soon be placed in the Museum.

The University Chapel

Faculty Committee on Chapel Services

Dr. Elliott, *Chairman;* Professors Murray, Miller, Lovejoy, and M. R. Smith.

University Chapel Union

Executive Committee: Professor B. E. Howard, *Chairman;* Professor H. D. Stearns, *Treasurer;* Professor A. T. Murray, Professor Walter Miller, Dr. O. L. Elliott, Professor O. M. Johnston, Mrs. M. R. Smith, Mrs. H. D. Stearns, Miss H. H. Brown, and Mr. L. E. Harter.

Mrs. Anna D. Starbuck, *Organist;* Dr. George B. Little, *Chorister.*

The Charter of the University prohibits sectarian instruction, but provides that there shall be taught in the University "the immortality of the soul, the existence of an all-wise and benevolent Creator, and that obedience to His laws is the highest duty of man."

Two voluntary religious services are maintained by the University—a Sunday morning church service and a Thursday afternoon vesper service. The University Chapel Union, organized by the University community in 1896, co-operates with the Faculty Committee on Chapel Services in the endeavor to make the religious services of the University an expression of the life of the community, and invested, as far as possible, with the atmosphere of a church home.

The Memorial Church

The Memorial Church, begun in 1899, will be completed in 1901. The building is in total length, through vestibule, nave, and apse, 190 feet; through transept, 156 feet. The tower is 164 feet from ground level to apex. The seating capacity, including galleries in the transept and over the vestibule, is seventeen hundred. Exterior and interior walls are of buff sandstone, with rough rock face outside and line tooled face inside. The floors are of concrete and mosaic tile; the roofs of open timber construction, natural wood finish, supporting terra cotta tile. The central tower is supported by four clusters of stone columns built

around a steel frame. The clear span of the arches under the tower is forty-one feet, and the soffits of the arches are fifty-two feet from the auditorium. The upper part of the tower is cut by two balconies, approached through corner turrets, and lighted by twenty-four windows. Three large memorial windows will light the apse, and the sixteen large windows of the nave and transept will illustrate a biblical allegory.

University Preachers

The following is the list of speakers and subjects in the University Chapel, Sunday mornings at eleven o'clock, for the calendar year ending March, 1901:

Professor Walter Miller.—*Easter.*

The Rev. Bradford Leavitt, San Francisco.—*The Way to Heaven.*

Professor Arthur Oncken Lovejoy.—1 *The Individuality of Religion.* 2. *The Outer and the Inner Life.* 3. *Patriotism.* 4. *Being an Individual.*

The Rev. Samuel Slocombe, San Francisco—*The Kingdom of Heaven.*

Mr. H. W. Rose, International College Secretary, Y. M. C. A.—*Association Work.*

The Rev. Arthur Henry Barnhisel, Los Gatos.—*Christ's Testimony of Himself.*

The Rev. Charles Reynolds Brown, Oakland.—*Right Methods in Religion.*

Professor Burt Estes Howard.—1. *True Greatness.* 2. *Personal Creeds.* 3. *All Things are Yours.* 4. *A Man's Religion.*

The Rev. Frank L. Hosmer, Berkeley.—*The Man in All Men.*

The Rev. George G. Eldredge, San Francisco.—*They that Hunger and Thirst after Righteousness.*

The Rev. George W. Stone, Field Secretary, American Unitarian Association, San Francisco.—*Altruism.*

Mr. Henry Weinstock, Sacramento.—*Jesus the Jew.*

The Rev. George C. Adams, D. D., San Francisco.—*Life a Gift from Above.*

The Rev. Nathan Adolphus Haskell, San Jose.—*The Beautiful Soul.*

Dr. Orrin Leslie Elliott.—*"Like as a Father."*

Professor Augustus Taber Murray.—1. *Christmas.* 2. *Worship.*

Mr. John R. Mott, General Secretary, World's Student Christian Federation.—*The Forward Movement.*

Mr. GEORGE W. LEAVITT, International College Secretary for Missions.—*The World's Missions.*

The Rev. ARTHUR H. BRIGGS, San Francisco.—*Christian Endurance.*

The Rabbi JACOB VOORSANGER, D. D., San Francisco.—*Opposite Religious Views.*

The Rev. CHARLES H. CATON, Chicago.—*An Open Door.*

The Rev. ROBERT F. MACLAREN, D. D., San Jose.—*The Attainment of Glory.*

The Rev. EUGENE HUNTINGTON BENSON, Santa Clara.—*A Godly Sorrow.*

Professor CHARLES MONTAGUE BAKEWELL, University of California.—*Immortality.*

Baccalaureate Sermon—May 27, 1900

The Rabbi JACOB VOORSANGER, D. D.—*The Coming of the Righteous Nation.*

University Lectures, Recitals, etc.

University Lectures

Public lectures on subjects of general interest, by members of the Faculty or by persons invited from abroad, are given in the Chapel, usually on Tuesday evenings. The following is the list of such lectures for the calendar year ending March, 1901:

President David Starr Jordan.—*1. The Passion Play of Oberammergau*, illustrated with lantern slides. *2. The Blood of the Nation. 3. China. 4. Japan*, illustrated with lantern slides.

Mr. Lee Emerson Bassett.—Select Readings.

Professor Alfred Emerson, of New York.—*The Classical Schools at Athens.*

Professor William Russell Dudley.—*The Trees of the National Forest Reserves of California*, illustrated with lantern slides.

Professor Ewald Flügel.—*University Ideals.*

Professor Henry Morse Stephens, Cornell University.—*England in Asia.*

Professor Burt Estes Howard.—*Democracy and Education.*

Dr. J. H. Kellogg, Battle Creek, Mich.—*The Importance of College Athletics.*

Mrs. Judith Ellen Foster, Washington, D. C.—*The Red Cross Work.*

Professor John Fryer, University of California.—*The Chinese Problem.*

Professor Henry Rushton Fairclough.—*A Trip through Canada*, illustrated with lantern slides.

Ng Poon Chew, Chinese Consul and Editor *Chung Sai Gat Po*, the Chinese daily of San Francisco.—*The Trouble in China as viewed by a Chinaman.*

Professor Albion Woodbury Small, University of Chicago.—*Preparation and Opportunity.*

Professor Daniel L. Ames, New York.—*Handwriting.*

Mr. Jack London, Oakland.—Reading: *An Odyssey of the North.*

The Hon. John W. Foster, Ex-Secretary of State.—*The Consular Service of the United States.*

President Arthur Twining Hadley, Yale University.—*University Aims and Ideals.*

Commencement Address—May 30, 1900

Professor William Henry Hudson.—*The Culture of To-Day and the Literature of To-Morrow.*

Musical Recitals

1. Mr. Leo Cooper, and Miss May Sullivan.
2. The Palo Alto Choral Society.
3. Miss Meta Asher, and Mr. Harry Samuels.
4. Professor Herman Genss, and Mr. Harry Samuels.
5. Professor H. B. Pasmore, Mrs. Edith Scott Basford, Misses Beulah George and Iveletta Geery, and others.
6. Mr. Samuel I. Savannah, and Mr. Arthur Fichenscher.

Founders' Day Address—March 8, 1901

Mr. Charles F. Lummis, Los Angeles.—*Education.*

Debates and Prize Contests

Intercollegiate Debate

An INTERCOLLEGIATE DEBATE, under the auspices of the Associated Students of Stanford and of the University of California, is held in San Francisco in April of each year.

The question for 1901 is, "*Resolved*, That the extinction of the Boer republics is for the permanent interest of civilization."

The contestants from Stanford are Messrs. CECIL MORTIMER MARRACK, WILLIAM ALFRED MORRIS, and WILLIAM CARR MORROW; alternate, EDWARD WALTER RICE.

Carnot Debate

The CARNOT MEDAL, for individual excellence in public speaking, given by the Baron de Coubertin, in honor of the late President Sadi-Carnot, is competed for by three representatives each of Stanford and of the University of California. The debate is held in February, at each University in alternate years. In 1901 the debate was held at Stanford, and the question was, "*Resolved*, That the French administrative law is incompatible with the spirit of a democratic republic."

The contestants from Stanford were Messrs. JOHN FRANCIS ENGLISH, Jr., CECIL MORTIMER MARRACK, and WILLIAM ALFRED MORRIS. The medal was awarded to WILLIAM ALFRED MORRIS.

University Associations

PHILOLOGICAL ASSOCIATION

Professor ERNEST MONDELL PEASE, *President;* Professor KARL G. RENDTORFF, *Secretary.*

The University Philological Association was organized September 17, 1892, for the purpose of reading and discussing the results of scientific investigations in language and literature. The membership consists of the instructors and advanced students in the different language departments in the University. The regular time of meeting is the last Thursday of each academic month, at 2:30 p. m. The following papers were presented during the calendar year ending April, 1901:

May 17, 1900. Professor HERBERT ZABRISKIE KIP—*A Comparison of the Three Extant Versions of the Wiener Genesis.* Mr. JEFFERSON ELMORE—*Some Plautine Emendations.*

October 4. Professor JULIUS GOEBEL—*The Development of Hermeneutics.*

November 1. Professor EWALD FLÜGEL—*Gower's Mirour de l'omme and Chaucer's Prologue to the Canterbury Tales.* Professor KARL G. RENDTORFF—*A Problem in German Syntax.*

November 22. Professor OLIVER MARTIN JOHNSTON—*History of the Condition Contrary to Fact in French.* Professor HERBERT ZABRISKIE KIP—*Wordsworth's Use of the Word 'Machine.'*

December 21. Professor AUGUSTUS TABER MURRAY—*Some Corrections to Liddell and Scott's Dictionary.*

January 31, 1901. Professor JOHN ERNST MATZKE—*The Sources of Reinbot von Durne's Passion of Saint George.*

March 8. Professor HENRY RUSHTON FAIRCLOUGH—*Certain Questions in the History of Latin Comedy.* Professor ERNEST MONDELL PEASE—*On a New Interpretation of Juvenal.*

March 28. Professor EWALD FLUGEL—*Chaucer's Use of the Word 'Religion.'*

THE SCIENCE ASSOCIATION

Professor CHARLES NEWTON LITTLE, *President;* Professor STEWART WOODFORD YOUNG, *Vice-President;* Professor HERMAN DE CLERCQ STEARNS, *Secretary.*

The Science Association was organized January 17, 1894. Original investigations and papers of general interest on scientific topics are presented from time to time.

The following papers were read before the Association between September, 1900, and April, 1901:

Professor JOHN CASPER BRANNER—*The Stone Reefs of Brazil.*

Professor STEWART WOODFORD YOUNG—*Metastability.*

Professor DOUGLAS HOUGHTON CAMPBELL—*Some Recent Studies in Fertilization of Flowering Plants.*

Professor FRANK ANGELL—*Some Subconscious Factors in Judgment.*

Professor CLEMENT AUSTIN COPELAND—*The Nernst Lamp.*

THE PHILOSOPHY CLUB

The Philosophy Club consists of members of the Faculty and graduate students interested in the untechnical discussion of questions of general philosophic interest. It has no formal organization. The first meeting was held in October, 1899, and the Club has since met monthly during the academic year.

During 1900-01 the discussions have dealt with a connected series of topics in the Theory of Knowledge. Papers have been read by Professor ANGELL, Professor BAKEWELL, of the University of California, Professor LOVEJOY, Professor HOSKINS, and Mr. PARSONS.

University Extension

Faculty Committee

Professor DUNIWAY, *Chairman;* Professors ANDERSON, CUBBERLEY, and MILLER.

The organization of University Extension societies is not undertaken by the University, but its instructors are, in general, prepared to respond to requests for courses of lectures not conflicting with University duties. They are also willing, whenever occasion arises, to undertake work in Teachers' Institutes, and to take part in lecture courses in neighboring towns.

In addition to a large number of single lectures delivered in the various cities and towns of the State, the following more extended courses were presented during 1900-01:

1. **Japan and China.**—*Four lectures* in San Jose. (President JORDAN.)

2. **German Literature during the Middle Ages.**—*Six lectures* in San Francisco. (Professor GOEBEL.)

3. **Causes of the Civil War.**—*Two lectures* in San Francisco. Professor DUNIWAY.)

4. **Diplomacy, Politics, and Slavery, during the Civil War.**—*Three lectures* in Oakland and Alameda. (Professor DUNIWAY.)

5. **The Colonial Period in the History of the United States.**—*Ten lectures* in Oakland. (Professor DUNIWAY.)

6. **Evolution of the State.**—*Four lectures* in Oakland. (Professor HOWARD.)

7. **Education and Democracy.**—*Ten lectures* for the Economic League. (Professor HOWARD.)

The Hopkins Laboratory

Professors Charles Henry Gilbert and Oliver Peebles Jenkins, Directors.

Chloe Lesley Starks, Artist of the Hopkins Laboratory.

Lydia M. Hart and Charles B. Hudson, Assistant Artists.

The Hopkins Seaside Laboratory, founded by the liberality of Mr. Timothy Hopkins, of San Francisco, is an organic part of the work of the University, and for the biological departments constitutes a summer session of the University. The buildings are located at Pacific Grove, two miles west of Monterey, and stand on a low bluff immediately facing the sea. They consist of two two-story structures capable of accommodating about eighty students, and contain four general laboratories, one lecture room, seventeen private rooms for special investigators, and a dark room for photography. They are provided with aquaria and running water, and all necessary facilities for biological study. The library and apparatus of the University are available for use in the laboratory.

The Laboratory makes provision for three classes of students:

1. Teachers or others who desire to become acquainted with marine animals and plants, and to learn the practical methods of their study.

2. Students in the Zoological, Physiological, and Botanical Departments of the University who wish to supplement their studies with work on living marine organisms under the favorable conditions of such a station.

3. Investigators who are prepared to make researches in marine biology, for which the Pacific Coast with its almost unworked field offers exceptional attractions.

SESSION OF 1900

The ninth session of the Laboratory was held during the summer of 1900, beginning June 11th.

Instructors

George Clinton Price, Ph. D., Associate Professor of Zoology, Leland Stanford Junior University.

Frank Mace MacFarland, Ph. D., Associate Professor of Histology, Leland Stanford Junior University.

George James Peirce, Ph. D., Associate Professor of Botany and Plant Physiology, Leland Stanford Junior University.

Assistants in the Laboratory

JOHN C. BROWN, A. B., Student in Zoology, Leland Stanford Junior University.

WILLIAM AUSTIN CANNON, A. M., Assistant in Botany, Leland Stanford Junior University.

JOSEPH GRINNELL, A. B., Student in Zoology, Leland Stanford Junior University.

ADELÁIDE LOWRY POLLOCK, Student in Physiology, Leland Stanford Junior University.

Courses of Instruction

1. General Zoology.—This course is designed for teachers and others who desire an acquaintance with the anatomy and life habits of marine animals, and with the methods pursued in laboratory study. The instruction consists of lectures, laboratory dissections, and field work. There are two or more lectures each week, and the remainder of each day is spent in the laboratory, or on the collecting grounds, under the immediate direction of the instructors. The embryology of one or more forms is briefly followed in connection with the anatomical work. Animals for study are selected so as to include one or more representatives of each of the larger groups of marine animals. (PRICE, BROWN.)

2. General Cryptogamic Botany.—This course is designed primarily to meet the needs of those students who intend to teach the outlines of the subject. It includes the study in the laboratory of representative forms from each group, and the examination of as many forms in connection with these as time will permit, in order to obtain as comprehensive an idea as possible of each group. Special attention is paid to the algæ, and students are encouraged to devote much time to these forms. Attention is paid to the collection, preservation, and preparation of material for class purposes. Lectures accompany the laboratory work.

(PEIRCE, CANNON.)

4. Embryology.—A course in Embryology, offered to those who have had the equivalent of the course in general zoology, and devoted principally to a study of the development of vertebrates. Attention is given to embryological technique, such as the preparation of surface views and of serial sections. (PRICE, GRINNELL.)

4. Comparative Morphology and Histology of the Nervous System and Sense Organs.—This course is open to all students acquainted with elementary histological technique. It consists of three lectures per week, accompanied by daily labora-

tory work upon a series of invertebrate and vertebrate forms. A limited number of students may also begin investigation along histological or cytological lines. (McFarland.)

5. Advanced Course in Zoology.—This course is designed for those who have had at least one year's work in zoology or physiology, and consists in more advanced studies in the morphology and classification of one or more groups of marine invertebrates. Abundant opportunity is given for the collection and preservation of material under the direction of the instructor, and students are encouraged to gain in this way a wide general knowledge of marine forms. (McFarland.)

Students

I. Those occupying investigators' rooms

William Fitch Allen, A. B., Student in Zoology, University.

Robert J. Terry, M. D., Professor of Anatomy, Washington University, St. Louis, Missouri.

Herbert Parlin Johnson, Ph. D., Assistant Professor of Zoology, University of California.

Nettie Maria Stevens, A. M., Student in Physiology, University.

II. Those taking regular courses

Alderman, Rupert Lewis, Student in Law, University.
Baird, Alvin Walter, Student in Physiology, University.
Banks, William H., Teacher in the Public Schools, Yolo County.
Bentley, James Andrew, Student in Physiology, University.
Boston, Walter Morten, Student in History, University.
Broughton, Marion Percival, Student in Physiology, University.
Brown, Joseph Grant, Student in Physics, University.
Brown, Mabel Houghton, Student in History, University.
Brune, Ernest Louis, Student in Law, University.
Butterfield, Alice Olivia, Student in History, University.
Caglieri, Victor Alexander, Student in Physiology, University.
Carlson, Anton Julius, A. B., Student in Physiology, University.
Chappel, Halbert William, Student in Law, University.
Chase, Thorington Clarke, Student in Chemistry, University.
Day, Leland Homer, Student in Physiology, University.
Day, William Clarence, Student in Economics, University.
Ferguson, Louis Bangs, Student in Physiology, University.
Folsom, David Morrill, Student in Geology, University.
Hart, Frank Russel, Student in Physiology, University.

Hathorne, Eleanor Hollingsworth, Student in History, University.
Havens, Harold, Student in Geology, University.
Holbrook, Charles E., Student in Law, University.
Holway, Ruliff Stephen, Teacher in State Normal, San Jose.
Horner, Robert M., A. M., Teacher of Natural Science, Waitsburg Academy, Waitsburg, Wn.
Howard, Orson, A. M., M. D., Professor of Natural History, University of Utah.
Hurlburt, May, Student in English, University.
Hyman, William M., A. B., Teacher in High School, Woodland.
Keller, Clara Drusilla, Student in German, University.
Langnecker, Harry Leslie, Student in Physiology, University.
Levy, Andre Bower, Student in Physiology, University.
Lynn, Ellen Utley, Student in English, University.
McNee, Alexander Edward, Student in Physiology, University.
Martin, Mary Viola, Student in German, University.
Mathews, Ellen, Student in Zoology, University.
Matthews, Helen Lucy, Student in History.
Mills, Helen Hall, Student in Zoology, University.
Morgan, Winifred June, Student in Physiology, University.
Pollock, Adelaide Lowry, Student in Physiology, University.
Randolph, Flora Albertine, Student in Botany, University.
Raymond, Irving C., Student in History, University.
Rider, Ella Moore, Student in Latin, University.
Robinson, Earl Clayton, Student in Zoology, University.
Sholander, Charles John, Student in Zoology, University.
Short, Frances Elizabeth, Student in Education, University.
Skillings, Mary Ellen C., Student in Education, University.
Wells, George Summers, Principal of Grammar School, San Jose.
Wisehart, Lon Kirby, Student in Law, University.
Zucker, Emmabelle Hudson, Student in English, University.

SESSION OF 1901

The session of 1901 will begin Monday, June 10th, the regular course of instruction continuing until July 20th. Investigators or advanced students may arrange to continue their work throughout the summer. A circular containing detailed information concerning the work of the Laboratory may be had on application to the Registrar or to the Directors.

Fees

To investigators, the facilities of the Laboratory are offered free. All others will be charged a fee of twenty-five dollars.

Catalogue of Students

NAME	HOME ADDRESS	MAJOR SUBJECT
Abrams, Le Roy,	*Inglewood,*	Botany
	A. B., Stanford, 1899.	
Ackerman, Lloyd Stuart,	*San Francisco,*	Economics
Ackerman, Sidney Irving,	*San Francisco,*	German
Adams, Bristow,	*Washington, D. C.,*	English
Adams, Frank,	*Wrights,*	Economics
Adams, Herbert Harter,	*Seattle, Wash.,*	Electrical Eng.
Adams, Sherwood Hopkins,	*Dawson City, Canada,*	Geology *Sp.*
Akers, Roberta Eleanor,	*Prescott, Ariz.,*	Mathematics
Albertson, Louis Hanson,	*Ingomar,*	Law
	B. L., Univ. of Pacific, 1900.	
Alden, Mary Estelle,	*Campbell,*	English
Alderman, Rupert Lewis,	*Santa Clara,*	Law
Alderson, Tom Marie,	*Mayfield,*	Law
	A. B., Univ. of Washington, 1896.	
Allaire, Grace Maud,	*Aurora, Ill.,*	German
Allen, Ada Julia,	*Mountain View,*	Education
Allen, Charles Partridge, Jr.,	*Denver, Col.,*	Civil Eng.
Allen, Chester Boyce,	*San Jose,*	Geology and Mining
Allen, Lily Burch,	*Palo Alto,*	Physiology *Sp.*
Allen, Margaret Varty,	*Portland, Ore.,*	History
Allen, William Fitch,	*Holland Patent, N. Y.,*	Zoology
	A. B., Stanford, 1900.	
Alston, Joseph Wade,	*Allegheny, Pa.,*	Geology
Alvarado, John Bolton,	*San Rafael,*	Geology
Ames, Kate,	*Napa,*	Education
Anderson, Chloe Case,	*San Jose,*	English
Anderson, Edward Playfair,	*San Jose,*	English
	A. B. and A. M., Univ. of Michigan, 1879; Ph. D., 1886.	
Anderson, Irving,	*Wallace, Idaho,*	Geology
Anderson, Malcolm Playfair,	*Menlo Park,*	Zoology
Anderson, Robert Van Vleck,	*Menlo Park,*	English
Andrade, Frank,	*Honolulu, H. I.,*	Civil Eng. *Sp.*
Anthony, Edith Anne,	*Pacific Grove,*	Mathematics
Anthony, Herbert William,	*Pacific Grove,*	Civil Eng.
Arnold, Alice Eugenia,	*Los Angeles,*	English
Arnold, Ralph,	*Palo Alto,*	Geology
	A. B., Stanford, 1899; A. M., 1900.	

Arqués, Francisca Luisa, *San Jose,* Romanic Lang.
Ashenfelter, Anna Bennett, *Silver City, N. M.,* English
Ashley, Florence Josephine, *Stockton,* English
Ashton, George Humboldt, *Menlo Park,* Electrical Eng. *Sp.*
Atherton, Cecelia Freeman, *Lakeport,* History
Atkinson, Harry Hunt, *Salt Lake City, Utah,* Economics
Atkinson, William Sackston, *Los Gatos,* Botany
A. B., Stanford, 1899.
Atterbury, Charles Delaplane, *Hood River, Ore.,* Geology *Sp.*
Austin, Arthur Oswin, *Stockton,* Electrical Eng.
Avery, Esther Van Tuyl, *Corvallis, Ore.,* English
Babcock, Harry Saltonstall, Jr., *Denver, Col.,* Civil Eng.
Bacher, Bertha Rachel, *San Jose,* German
Bacon, Robert Harold, *Palo Alto,* Civil Eng.
Bacon, Sanford Lord, *San Jose,* Law
Bailey, Elizabeth Harriet, *San Jose,* Education
Bailey, Forrest Cutter, *San Jose,* English
Baird, Alvin Walter, *Portland, Ore.,* Physiology
Baker, Clarence Ulysis, *Santa Clara,* English
Baker, Cleveland Hall, *Oakland,* Law
Baker, Emily Lister, *San Francisco,* English
Baker, Jay B., *Santa Ana,* Electrical Eng.
Baker, Oscar Walton, *San Jose,* Law
Baker, Warren Dwight, *Buchanan, Mich.,* Greek
A. B., Univ. of Mich., 1893; A. M., 1894.
Balcom, Emory Edward, *Santa Ana,* Law
Balcomb, Alona, *Monmouth, Ore.,* Education *Sp.*
Balcomb, Ernest Elwell, *Monmouth, Ore.,* Physiology
Balcomb, Jean Bart, *Woodland Park, Col.,* Civil Eng.
B. S., Colorado State Agricultural Coll., 1895.
Baldwin, Grace Sarah, *Ontario,* Drawing
Baldwin, Henry Giles, *San Francisco,* Electrical Eng. *Sp.*
Baldwin, Leroy Kingsley, *Glen Falls, N. Y.,* Geology
Ball, Lew Anna, *Oakland,* Education
Ball, Robert Bruce, *Banning,* Electrical Eng.
Ballagh, Ehrnest, *Porterville,* Electrical Eng.
Ballard, Jessie May, *Seattle, Wash.,* History
Bancroft, Frederic Wolcott, *Denver Col.,* Physiology
Bangs, Edgar Hale, *Redlands,* Mech. Eng.
Bansbach, Louis Philip, *Denver, Col.,* Chemistry
Barber, William Burton, *Alameda,* Geology
Barkan, Hans, *San Francisco,* Physiology

Barker, William Cyrus,	*Ogden, Utah,*	Geology
Barnard, Jessie Elizabeth,	*Chico,*	History
Barnard, Maryline E.,	*Ventura,*	Physiology
Barneberg, Grace Elizabeth,	*San Luis Obispo,*	History
Barnes, Mary Ruth,	*Pacific Beach,*	German
Barnett, Mary Amelia,	*Santa Rosa,*	Zoology
Barnhisel, Claire Grace,	*San Jose,*	History
	A. B., Stanford, 1901.	
Barnhisel, Clara Duane,	*Palo Alto,*	German
Barnhisel, Walter Benedict,	*San Jose,*	Law
Barnhouse, Mabel,	*Watsonville,*	Latin
Barnwell, Susie Dale,	*Los Angeles,*	Rom. Lang.
Barr, William Lawrence,	*Centralia, Wash.,*	Economics
Barrett, Annie,	*Palo Alto,*	Latin
Barrett, Gertrude M.,	*Ontario,*	Botany
Bartlett, Pearl Muriel,	*Fallbrook,*	English
Barton, George Castle,	*San Diego,*	History
Bartruff, Mary Macbride,	*Bellefonte, Pa.,*	English
Bassett, Lee Emerson,	*Salem, Wis.,*	English
	A. B., Stanford, 1901.	
Baum, Mabel Helen,	*Alameda,*	Rom. Lang.
Beach, Jesse Marion,	*Colton,*	Latin
Beach, Wesley Heman,	*Colton,*	Latin
	A. B., Stanford, 1900.	
Beagles, Walter Conrad,	*Napa,*	Law
Bean, Jane Louise,	*San Jose,*	History
Beardslee, Francis Claude,	*Duarte, Col.,*	Law *Sp.*
Beebe, Graham Hughes,	*Porterville,*	Law
Beebe, Lela,	*Watsonville,*	Physiology
Beecher, Flora Belle,	*Santa Cruz,*	History
Beermaker, Ida Amanda,	*San Jose,*	English
	A. B., Stanford, 1898.	
Beggs, Lulu Mabel,	*Los Gatos,*	English
Behlow, Edgar Augustus,	*San Francisco,*	Electrical Eng.
Bell, Jessie Frances,	*Palo Alto,*	Economics
Bell, Jessie Newcomb,	*Santa Barbara,*	English
Bell, Ruby Green,	*Knightstown, Ind.,*	Zoology
Bennett, Frank Waite,	*Phoenix, Ariz.,*	Law
Bennett, Lyman Ranson,	*Phoenix, Ariz.,*	Economics *Sp.*
Benson, Alice Loretta,	*Portland, Ore.,*	Latin
Bentley, James Andrew,	*Modesto,*	Physiology
Bernardin, Alfred Louis,	*Evansville, Ind.,*	Mech. Eng.
	A. B., Christian Brothers College (St. Louis), 1900.	

Bernardin, Emma,	*Evansville, Ind.,*	Rom. Lang. *Sp.*
Bernhard, George William,	*Oakdale,*	Electrical Eng.
Berwick, Edward, Jr.,	*Monterey,*	History *Sp.*
Bidwell, Rolfe Bishop,	*Los Angeles,*	Law *Sp.*
Billings, Florence Frances,	*Redlands,*	Latin
Billings, William Elbridge,	*Concord,*	Law
Bird, Susan Frances,	*Banning,*	English
Birdsall, Kathrine,	*Berkeley,*	German
	A. B., Stanford, 1901.	
Birtch, Fayette,	*San Jose,*	Physiology
Black, Roy Harry,	*San Jose,*	Electrical Eng.
Blair, Thomas Arthur,	*San Jacinto,*	Mathematics
Blake, Sarah Jane,	*Cupertino,*	History *Sp.*
Blodget, Claude Raymond,	*Bakersfield,*	Economics *Sp.*
Boalt, Gilbert Denison,	*Palermo,*	Law
Bonnell, Cornelia,	*Palo Alto,*	Physiology *Sp.*
Bonnell, John Kester,	*Palo Alto,*	English
Bootes, Bertha Burnham,	*Salta Lake City, Utah,*	English
Borden, Mary Gray,	*Montgomery, Ala.,*	Physiology
Boren, Frank Henry,	*San Bernardino,*	Chemistry
Borgquist, Alvin,	*Palo Alto,*	Education
	B. S., Univ. of Utah, 1897.	
Borough, Marie,	*San Francisco,*	Greek
Boston, Walter Morten,	*Durango, Col.,*	History
	A. B., Stanford, 1900.	
Boulware, Alexander Stockton,	*Palo Alto,*	Latin
Boulware, Lucretia,	*Palo Alto,*	Latin
Bourland, William Franklin,	*Petersburg, I. T.,*	Law
Bowers, Walter Lewis,	*Ouray, Col.,*	Law
Bowman, Larrey MacFarlane,	*Delphi, Ind.,*	English
Boyd, Ada Howard,	*Phoeniz, Ariz.,*	Mathematics
Boyd, Bessie Agnes,	*Riverside,*	Mathematics
Boyd, Hugh James,	*Riverside,*	Mathematics
	A. B., Stanford, 1900.	
Boyd, Katharine McIntyre,	*Riverside,*	German
Boyle, Harry,	*San Rafael,*	History
*Braden, Fred Bassett,	*Los Angeles,*	Law
	A. B., Stanford, 1900.	
Bradford, Cora May,	*Carthage, Mo.,*	Drawing
Bradley, Christopher Mason,	*Tacoma, Wash.,*	English
Bradley, Fred Earnest,	*Houston, Texas,*	Class. Phil.

* Work completed Summer, 1900.

Bradley, Frank Foster,	*Redlands,*	Geology *Sp.*
Bradley, Oliver U.,	*Tacoma, Wash.,*	Geology
Bragg, George Henry, Jr.,	*San Jose,*	Electrical Eng.
Breen, Eugene,	*Hollister,*	Civil Eng.
	A. B., Santa Clara Coll., 1898.	
Bremner, Luella May,	*Santa Rosa,*	Physiology
Bremner, Olney Edwin,	*Santa Rosa,*	Physiology
Brickell, Howard,	*San Francisco,*	Law
Briggs, Caroline Elizabeth,	*Westside,*	Mathematics
	A. B., Stanford, 1899.	
Bristol, Alice Josephine,	*Redwood City,*	German
	A. B., Stanford, 1899.	
Bromfield, Beatrice Mary Ware,	*San Mateo,*	English
Brooke, Roy Latney,	*Sacramento,*	Law
Brookie, Frank McCord,	*Vincennes, Ind.,*	Civil Eng.
Brotherton, Theodore Willard,	*Los Angeles,*	Geology *Sp.*
*Broughten, Marian Percival,	*Marysville, Kansas,*	Physiology
	A. B., Stanford, 1900.	
Brower, Adna Treat,	*San Jose,*	Electrical Eng.
Brown, Agnes Elizabeth,	*Palo Alto,*	Rom. Lang.
Brown, Anna Bradford,	*Seattle, Wash.,*	German
Brown, Audrey Ruth,	*Portland, Ore.,*	Greek
Brown, Edna Jeraldine,	*San Jose,*	History
Brown, Elmer Allen,	*San Francisco,*	Law
Brown, Frederick Allen,	*Pasadena,*	Zoology
Brown, Harriet Henrietta,	*Palo Alto,*	English
Brown, Howell Chambers,	*Pasadena,*	Geology
Brown, Joseph Grant,	*Stillman Valley, Ill.,*	Physics
Brown, Leonard Harvey,	*Palo Alto,*	Law
Brown, Mabel Haughton,	*Washington, D. C.,*	History *Sp.*
Brown, Martha Jane,	*Santa Cruz,*	History
Brown, Mary Elizabeth,	*Kernville,*	English
Brown, Ora Lee,	*Seattle, Wash.,*	History
Brown, Olga Margaret,	*Portland, Ore.,*	German
Brown, Warren Bateman,	*Mayfield,*	Physiology
Brown, William Harvey,	*Lockhart, Texas,*	Electrical Eng.
Brownell, Ada Lillian,	*Skagway, Alaska,*	Philosophy *Sp.*
Brownlie, Charlotte Wakerley,	*Vallejo,*	English
Brua, Elmer George,	*Rialto,*	Geology
Bruce, Charlotte Elizabeth,	*San Francisco,*	Latin
Bruckman, Grace Hermanita,	*Ogden, Utah,*	Physics

* Work completed Summer, 1900.

Brune, Ernest Louis,	*San Francisco,*	Law
Bryan, Richard,	*Anacostia, D. C.,*	Economics
Bubb, Benjamin Clarence,	*Mountain View,*	Drawing
Burcham, John Samuel,	*Salem, Ore.,*	Zoology
Burcham, James Taylor,	*Palo Alto,*	Law
A. B., Stanford, 1897.		
Burkett, Joseph Miller,	*Hailey, Idaho,*	Civil Eng.
Burnap, Christine Mary,	*Coronado,*	History
Burnett, William Wesley,	*Adelaide,*	Law
Burns, May Elizabeth,	*San Jose,*	Rom. Lang. *Sp.*
Burrell, Varina Jeannette,	*San Jose,*	Education
Burton, Clifford E.,	*Kansas City, Mo.,*	Economics
Burtscher, Theresa,	*Auburn,*	Education
Butterfield, Alice Olivia,	*Wilcox, Ariz.,*	History
Butterfield, Hayden Gearhart,	*Cupertino,*	Elec. Eng.
Button, Allie May,	*Camden, O.,*	English *Sp.*
Button, Ned Hale,	*San Diego,*	Latin
Byxbee, John Fletcher, Jr.,	*Palo Alto,*	Civil Eng.
Caglieri, Victor Alexander,	*San Francisco,*	Physiology
Ph. B., Mt. Angel Coll., Or., 1899.		
Caldwell, Andrew Arthur,	*San Jose,*	Economics
Caldwell, Mary Lucile,	*San Francisco,*	English
A. B., Stanford, 1901.		
Cameron, James William,	*Belgrade, Mont.,*	Law
Camp, Grace Cleone,	*Palo Alto,*	English
Campbell, Donald Percy,	*Chemawa, Ore.,*	Law
Campbell, Henry Avery,	*Sausalito,*	Civ. Eng.
Campbell, William Pleasant,	*Covington, Tenn.,*	Latin
A. B., Stanford, 1901.		
Cantwell, Charles Abraham,	*Tulare,*	Law
Card, Ernest Mason,	*Tacoma, Wash.,*	Economics
Carl, George Graham,	*Pendleton, Ore.,*	Law *Sp.*
Carlson, Anton Julius,	*Chicago, Ill.,*	Physiology
A. B., Augustana Coll., 1898; A. M., 1899.		
Carmer, Henrie Stones,	*Palo Alto,*	Drawing *Sp.*
Carpenter, Walter Clyde,	*San Luis Obispo,*	Law
Carr, Jesse Douglas,	*Yreka,*	Mechanical Eng. *Sp.*
Carter, Estella Pearl,	*Palo Alto,*	Zoology
Carver, Laura Marion,	*Meadow Creek, Mont.,*	German
Cary, Iva Lois,	*Whitewater, Wis.,*	English
Castagnetto, George Allen,	*San Francisco,*	Physiology
Caswell, Georgia Alberta,	*Los Angeles,*	English
Cavallaro, Dominick Clifton,	*San Jose,*	Mathematics

Cavanagh, Angus Leonard,	*Rincon,*	Physics
Chadbourne, Edward Merriam,	*Los Angeles,*	Civ. Eng.
Chaddock, Edith Grace,	*Fresno,*	Drawing
Chamberlin, Allen Mortimer,	*San Jose,*	Geology and Mining
Chambers, Genevieve,	*San Jose,*	Rom. Lang.
Chandler, Grace Lucinda,	*Smith Centre, Kansas,*	English
Chandler, Katherine Agnes,	*San Francisco,*	History
	A. B., Stanford, 1900.	
Chandler, Winfred Buford,	*Baker City, Ore.,*	English
Chapman, Mildred Pitkin,	*Riverside,*	History
Chappel, Halbert William,	*Batavia, N. Y.,*	Law
Charles, Mabel Rankin,	*Palo Alto,*	Physiology
	A. B., Stanford, 1898.	
Charles, Shirley Mansfield,	*Palo Alto,*	English
Chase, Dorothy Hinsdale,	*Oregon City, Ore.,*	Zoology *Sp.*
Chase, Thorington Clarke,	*San Francisco,*	Chemistry
Clark, Charles Lester,	*Live Oak,*	Electrical Eng.
Clark, George Archibald,	*Palo Alto,*	History
	B. L., Univ. of Minnesota, 1891.	
Clark, George Herbert,	*San Francisco,*	History
Clarke, Lawrence Nash,	*Erie, Pa.,*	Mathematics
Cleary, Harriett Andrews,	*San Diego,*	English
Cleveland, Earle Townsend,	*Tokio, Japan,*	English
Clinton, Lynne Fox,	*Salt Lake City, Utah,*	Economics
Cochran, George Thomas,	*Palo Alto,*	Law
Cochrane, Marie,	*San Bernardino,*	Latin
Cocks, Bertrand Richard,	*Palo Alto,*	Greek *Sp.*
Coe, Harrison Streeter,	*Palo Alto,*	Geology
Coffin, James Gilman,	*Boulder, Col.,*	Latin
	A. B., Stanford, 1900.	
Coffman, William Sherman,	*Healdsburg,*	Law *Sp.*
Cohn, Julius Benedict,	*Grinnell, Ia.,*	History
Colberg, Henry John,	*Stockton,*	Mechanical Eng. *Sp.*
Cole, Alice May,	*San Francisco,*	Class. Phil.
Cole, Augusta Marie,	*Gilroy,*	History
Coleman, Cynthia Edna,	*Dixon,*	Latin
	A. B., Stanford, 1901.	
Coleman, George Albert,	*Pomona,*	Zoology
Coleman, Rolla Wood,	*Centralia, Kansas,*	Law
	A. B., Baker Univ., 1898.	
Collier, David Henderson,	*Denver, Col.,*	Chemistry
Collyer, Norman,	*Tacoma, Wash.,*	Civil Eng.
Condit, Jennie Rafter,	*Verona, N. J.,*	Physiology

Cone, Elizabeth Hiett,	*Salinas,*	English
Cone, James Stone,	*Salinas,*	History
Congdon, Frances Harriet Whipple,	*Palo Alto,*	Education
Conneau, Myrtie,	*Palo Alto,*	History
	A. B., Stanford, 1901.	
Connell, Lucy Ora,	*Santa Ana,*	German
Conner, Guy Washington,	*La Conner, Wash.,*	Geology
Cook, Jessie Loring,	*San Jose,*	History
Cooke, Sorrie Lillian,	*Santa Ana,*	Education
Cooley, Arthur Edward,	*Cloverdale,*	Law
Coolidge, Herbert Francis,	*Riverside,*	English *Sp.*
Coons, James Watt,	*Palo Alto,*	Mechanical Eng. *Sp.*
Cooper, Elizabeth Procter,	*San Jose,*	Physiology
Cooper, John Titus,	*Los Angeles,*	Law
Cooper, Kenneth Farra,	*Portland, Ore.,*	Civil Eng.
Coover, John Edgar,	*Greeley, Col.,*	Philosophy
Copp, Andrew James, Jr.,	*Los Angeles,*	Class. Phil.
Copp, William Whipple,	*Los Angeles,*	Chemistry
Corbet, Mary,	*Palo Alto,*	Rom. Lang.
Corbusier, Francis Addison,	*Governor's Island, N. Y.,*	Mech. Eng.
Corker, Lucy Alma,	*Salt Lake City, Utah,*	History
Cortes, Charles Eliseo,	*Guadalajara, Mexico,*	Civil Eng.
Cory, Harriet,	*San Jose,*	English
	A. B., Stanford, 1895.	
Cottle, Everett Royal,	*San Jose,*	Geology and Mining
*Cotton, Sarah Elizabeth,	*Indianapolis, Ind.,*	Botany
	A. B., Lake Forest Univ., 1896; A. B., Stanford, 1900.	
Coulter, Mabel Annie,	*Salinas,*	English
Courtright, Nellie Brooks,	*Aurora, Ill.,*	Latin
Cowan, John Francis,	*Los Angeles,*	Physiology
Cowden, Dave Van Clief,	*San Jose,*	Law
Cowdery, Alice May,	*San Francisco,*	English
Cox, Alvin Joseph,	*San Jose,*	Chemistry
Cox, Mary M.,	*San Francisco,*	German
Cramer, Sophia,	*Wausau, Wis.,*	German *Sp.*
Crandall, Esther,	*Palo Alto,*	Greek
Crane, Arthur Garfield,	*Fallbrook,*	English
Cranston, William McGregor,	*San Francisco,*	Law
Crary, Charles Judson,	*Boone, Ia.,*	Economics
Crary, Clarence Stephen,	*Boone, Ia.,*	Economics
Cravens, Mary Ruhama,	*Sacramento,*	Zoology

* Work completed Summer, 1900.

Crawford, Clarence Harrison, *Union, Ore.*, Law
Crawford, Ruby Belle, *Corvallis, Ore.*, Mathematics
Creager, Jessie Frances, *Phoenix, Ariz.*, Education
Crippen, John Herbert, *Point Loma*, Law
Critchlow, Florence Marion Tabor, *San Francisco*, English
A. B., Northwestern Univ., 1892.
Cromwell, George, *Fallbrook*, Civil Eng.
Cronyn, Thoreau, *Bernardston, Mass.*, English
Crosiar, Annie Jane, *Utica, Ill.*, Education *Sp.*
Cross, Charles Warren, *East Oakland*, Mechanical Eng.
A. B., Stanford, 1901.
Cross, Robert Patterson, *Chicago, Ill.*, Law
Crossman, Walter Allen, *San Jose*, History
Crow, Benjamin Stewart, *San Jose*, Law
Crowell, Royal Franklin, *Carson City, Nev.*, Law
Crowfoot, Ray Lee, *Paso Robles*, Civil Eng.
Cummings, Frank J., *Petrolia*, History
Cunningham, Athan David, *Anderson*, Education *Sp.*
Currin, Frances M., *Salem, Ore.*, Mathematics *Sp.*
Curtis, Earl W., *The Dalles, Ore.*, Physiology *Sp.*
Cuthbertson, Grace Darling, *Manchester*, Education
Cutter, Mary Adeline, *Pelham, N. H.*, History *Sp.*
Cutting, Theodore Abijah, *Campbell*, English
Daggett, Henry Austin, *San Diego*, Economics
Dahlgren, Arthur L., *Easton*, Law *Sp.*
Dale, Lincoln, *Wabash, Ind.*, History
A. B., Indiana Univ., 1895.
Daly, Kathryn Helen, *San Francisco*, History
A. B., Stanford, 1901.
Davenport, Nina Claire, *San Jose*, English
Davidson, Cassie Aleda, *San Diego*, History
Davis, Delos Darwin, *Mayfield*, Botany *Sp.*
Davis, Francis Clarke, *Rector, Texas*, History
B. S., Baylor Univ., 1900.
Davis, Myrtle A., *Monrovia*, English
Davis, Norman Hezekiah, *Tullahoma, Tenn.*, Law
Davis, Paul M., *Tullahoma, Tenn.*, Latin
Davis, Rebecca Louise, *Sycamore*, History
A. B., Stanford, 1901.
Davis, Sydney Leander, *Pensacola, Fla.*, Rom. Lang.
Davis, Wilbert Foster, *Pittsburg, Pa.*, Law
Dawson, Mary Elizabeth, *Butte, Mont.*, English
Dawson, Percy Beach, *Butte, Mont.*, Mechanical Eng. *Sp.*

Dawson, Ralph,	*Butte, Mont.*,	Chemistry
Day, Homer Leland,	*San Francisco*,	Physiology
Day, William Clarence,	*Santa Barbara*,	Economics
Deal, William Griffith,	*San Francisco*,	Law
Decarli, Milo Charles,	*Waddington*,	Law
Decker, Nathan,	*Casco, Wis.*,	English
Deering, Elsie Louise,	*Boone, Ia.*,	Drawing
De Forest, Joseph Guthrie,	*Mountain View*,	Law
	Ph. B., Portland Univ., 1898.	
Dehy, James Gordon,	*Bishop*,	Law *Sp.*
Dellinger, Edna Leland,	*New Whatcom, Wash.*,	History
Dennen, Grace Atherton,	*Los Angeles*,	English
	A. B., Smith Coll., 1892; A. M., 1895.	
Denton, Arthur Peebles,	*Seattle, Wash.*,	Geology and Mining
Derby, Marion Amoret,	*Palo Alto*,	Zoology
Detrick, Charles Reighley,	*Menlo Park*,	Economics
	A. B., Harvard Univ., 1891.	
Dewey, Clare Hanna,	*San Jose*,	English
De Witt, Marcus Elmo,	*Tulare*,	History
Dewitt, Saida Kern,	*San Francisco*,	Physiology
Dickson, William Ernest,	*Eureka*,	Law
	A. B., Stanford, 1900.	
Dittmar, Carl Frederic,	*Redding*,	Law *Sp.*
Diviny, Thomas Matthew,	*Sacramento*,	Law
Dixon, James Le Roy,	*Needham, Mass.*,	Class. Phil.
	A. B., Stanford, 1899.	
Doan, Frank Wilson,	*Florence, Ariz.*,	Law *Sp.*
Doane, William Charles,	*Pasadena*,	Zoology
Dodd, Robert William,	*San Francisco*,	Chemistry
Dodge, Ethel Allen,	*Redwood City*,	Latin
Doering, Edmund James,	*Chicago, Ill.*,	Law
Dole, Norman Eliot,	*Riverside*,	Chemistry
Dollarhide, Winefred,	*Napa*,	English
Doran, Katharine May,	*Redlands*,	History
Dorset, Helen,	*La Crosse, Wis.*,	Latin
Dorsey, Florence Eugenia,	*San Francisco*,	Entomology
	A. B., Stanford, 1899.	
Dougherty, Lewis Atkinson,	*San Francisco*,	History *Sp.*
Doughty, Grace Eva,	*Napa*,	English
	B. S., Napa Coll., 1895; A. B., Stanford, 1897.	
Downing, Helen,	*Los Angeles*,	German
Downing, Mary,	*Palo Alto*,	Rom. Lang.
Drake, Frederick Henry,	*Portland, Ore.*,	Law

Dryer, George William,	*Santa Ana,*	Law
Dryer, Katharine,	*Santa Ana,*	German
Drysdale, Florence Eda,	*Santa Rosa,*	English
Dudley, Flora Helen,	*San Jose,*	Education
Dumars, Henry Dunn,	*Palo Alto,*	Mechanical Eng. *Sp.*
Dunbar, Florence,	*San Diego,*	Rom. Lang.
	A. B., Stanford, 1900.	
Duncan, Charles L.,	*Porterville,*	English
Dunn, Amy Louise,	*Eugene, Ore.,*	Latin
Dunn, Walter Francis,	*Duarte,*	Law
Durkee, Florence Ella,	*St. Paul, Minn.,*	Zoology
Dustman, Frederick Arnold,	*Gettysburg, Pa.,*	Law
Duval, Ernest Hawley,	*Saticoy,*	History *Sp.*
Dyer, Susie Louise,	*Palo Alto,*	Physiology
	A. B., Stanford, 1899.	
Edeline, Sydney Peter,	*Eureka,*	Mechanical Eng. *Sp.*
Edgerly, Edith Folsom,	*Pomona,*	History
Edwards, Alice Mary,	*San Jose,*	German
Edwards, Gordon William,	*Portland, Ore.,*	Electrical Eng.
Edwards, Harry James,	*San Diego,*	History
Edwards, Haven Wilson,	*San Jose,*	History
	A. B., Stanford, 1900.	
Edwards, Jefferson James,	*Fresno,*	Law
Elkus, Charles de Young,	*San Francisco,*	Law
Ellenwood, Frank Oakes,	*Palo Alto,*	Mechanical Eng.
Elliot, Elisabeth Loganoff,	*Alameda,*	Zoology *Sp.*
Elliott, Malcolm,	*Honolulu, H. I.,*	Economics
Elmer, Adolph Daniel Edward,	*Clarkes, Ore.,*	Botany
	B. S., Washington Agr. Coll., 1899.	
Ely, Helen Heath,	*Davenport, Ia.,*	Latin
Emerson, George Irving,	*Centerville,*	Electrical Eng.
Emerson, Ralph Damon,	*Palo Alto,*	Mechanical Eng.
Engle, Stedman Jay,	*Santa Cruz,*	Civil Eng.
English, John Francis, Jr.,	*San Francisco,*	Law
Erb, William Maurice,	*Chemainus, B. C.,*	Economics *Sp.*
Evans, Genevieve V.,	*Palo Alto,*	Latin
Evans, Herbert Francis,	*Highland Park, Ill.,*	English
Evans, Jane Elizabeth,	*Anaconda, Mont.,*	Rom. Lang.
Evans, Milo Hart,	*Kinsman, O.,*	Chemistry
Everett, Elizabeth Abby,	*Sutter,*	Education
Everett, Laura Bell,	*Sutter,*	English
Everett, Ralph Waldo,	*Sutter,*	History
Faris, Margaret Summers,	*Sacramento,*	History

Farmer, Luella Bell,	*Palo Alto,*	German *Sp.*
Farrar, Mercer Hayl,	*Tulare,*	Law
Fay, Arline Roque,	*San Diego,*	History
Fay, James Archer,	*Anaheim,*	Geology
Fay, Maud Merrill,	*San Diego,*	German
Ferguson, Amy Parker,	*Stockton,*	English
Ferguson, James,	*Palo Alto,*	History
	A. B., Stanford, 1899.	
Ferguson, Louis Bangs,	*Cedar Rapids, Ia.,*	Physiology
	A. B., Stanford, 1901.	
Fernald, Reginald Goodwin,	*Santa Barbara,*	Law
Ferrari, Louis,	*San Francisco,*	Law
Ficke, Theodore Henry,	*Lake Zurich, Ill.,*	Law *Sp.*
Fickes, Helen Elizabeth,	*Steubenville, O.,*	History
Fickes, Mary Frances,	*Steubenville, O.,*	German
Field, Robert Estee,	*St. Louis, Mo.,*	Mechanical Eng.
Fifield, Ethel May,	*San Francisco,*	English
Firebaugh, Charles Ludwig,	*Palo Alto,*	Law
Fisher, Ferdinand Elliott,	*Indianapolis, Ind.,*	Law
	Ph. B., De Pauw Univ., 1900.	
Fisher, Ralph Stephen,	*The Dalles, Ore.,*	Physiology
Fisher, Walter Kenrick,	*Washington, D. C.,*	Zoology
Fitting, Ralph Ulf,	*San Bernardino,*	Electrical Eng.
Flint, E. Royal,	*Palo Alto,*	Latin
	A. B., Stanford, 1901.	
Fogg, Edward,	*Tacoma, Wash.,*	History
Folsom, David Morrill,	*White Sulphur Springs, Mont.,*	Geology
Forbes, Walter Dale,	*Ogden, Utah,*	Chemical Eng. *Sp.*
Ford, Freeman Arms,	*Youngstown, O.,*	English
Ford, Georgiana Bishop,	*Palo Alto,*	English
	A. B., Stanford, 1895.	
Forrest, Curtis Tuttle,	*Oakland,*	Geology
Fosdick, Archibald Morris,	*Palo Alto,*	History
Foss, John Harrison,	*San Jose,*	Civil Eng.
Foster, Alfred Matthews,	*Canton, Texas,*	English *Sp.*
Foster, Edith Annie,	*Ventura,*	History
Foster, Frank H.,	*Los Gatos,*	Law
Foster, Hugh Gwyn,	*Coronado,*	Law
Foster, Mary Christine,	*Coronado,*	History
Fowler, Frederick Hall,	*Palo Alto,*	English
Fowler, Ruth,	*Santa Rosa,*	Mathematics
France, Lucy Mabel,	*San Francisco,*	Latin
Francis, William Carson, Jr.,	*Buffalo, N. Y.,*	Drawing

Fraser, Anna Graeme,	*San Jose,*	History
	A. B., Stanford, 1900.	
Fraser, William Royal,	*Palo Alto,*	Electrical Eng.
Frazier, Leland,	*Grand Centre, Mo.,*	Physiology *Sp.*
Frederickson, Albion Fabian,	*Templeton,*	Electrical Eng.
Free, Arthur Monroe,	*Mountain View,*	Law
Freeman, Eldora,	*Cupertino,*	Latin
Friedman, Henry Albert,	*San Francisco,*	Economics
Frink, Lester Daniel,	*Mountain View,*	Electrical Eng.
Frisselle, Edward Irving,	*Bakersfield,*	Economics
Frisselle, Ralph D.,	*Bakersfield,*	Economics
Frisselle, Samuel Parker,	*Bakersfield,*	Economics
Frost, Martha Mahalah,	*San Diego,*	German
Frowenfeld, Walter,	*San Francisco,*	Economics
Fruhling, Arthur Ferdinand,	*San Jose,*	Law
Fry, H. Ray,	*San Jose,*	Law
Fryar, Emma Elizabeth,	*Soda Springs, Idaho,*	Education *Sp.*
Fujii, Juroku,	*Hiroshima, Japan,*	Chemistry
Fukukita, Yasunosuke,	*Tsu, Japan,*	English
Fuller, Lewis Everett,	*San Mateo,*	Economics
Fuller, Mabel Blake,	*Pomona,*	Education
	B. L., Pomona College, 1900.	
Gaddis, Fletcher Eugene Allen,	*Santa Rosa,*	History
Gage, George Guilford,	*Oakland,*	Chemistry
Galloway, Frances Haney,	*Weiser, Idaho,*	Education *Sp.*
Garibaldi, Kathryne Elvira,	*Merced,*	Latin
Garlinghouse, Lois Edna,	*Modesto,*	Latin
Garner, Cora Ettie,	*Hollister,*	History
Garner, Lettie Maude,	*Hollister,*	Physics
Garratt, Graham Leslie,	*Bhusaval, India,*	Electrical Eng.
Gay, Harold Sinclair,	*Redlands,*	Geology
Geer, Fred Asahel,	*Turlock,*	Geology
Geis, Helen Dudu,	*Fresno,*	German
Geissler, Arthur Dorman,	*San Francisco,*	Chemistry
Ghirardelli, D. Lyle,	*San Francisco,*	Mechanical Eng.
Gibson, Cora Helen,	*Lakeport,*	English
Giddings, Charles Nelson,	*Ogden, Utah,*	Chemistry
Gildersleeve, Joseph Burt,	*Palo Alto,*	Romanic Lang.
Giles, Joe Thomas,	*Palo Alto,*	Physics
	A. B., Indiana Univ., 1894.	
Gill, Maryland Elizabeth,	*W. Berkeley,*	German
Gillespie, Claude Bailey,	*Palo Alto,*	Law

Gilman, Charles Edward,	*Palo Alto,*	Geology
Gilman, Mary Katharine,	*Palo Alto,*	Economics
Gilman, Philip Kingsnorth,	*Palo Alto,*	Physiology
Givens, John Alfred,	*Blackfoot, Idaho,*	Civil Eng.
Goodhue, Carrie Amanda,	*Oakland,*	German *Sp.*
Goodwin, Lucia,	*Aurora, Ill.,*	Education
Gossett, Evangeline Singleton,	*Palo Alto,*	English
Graebe, Mary Dranga,	*San Francisco,*	Latin *Sp.*
Graham, Emilia Esterly,	*San Jose,*	Romanic Lang. *Sp.*
Grant, Daniel Garfield,	*San Francisco,*	Economics
Grape, Helene Wilhelmi,	*Indianapolis, Ind.,*	German
Gray, Albert Maywood,	*Menlo Park,*	Geology and Mining
Gray, Eunice Thompson,	*Luverne, Minn.,*	English
Gray, Ida,	*Suisun,*	Education
Gray, Walter Kempster,	*Milwaukee, Wis.,*	History
Green, Lucius Payton,	*Mountain View,*	Law
Greene, Mary Jean,	*Santa Cruz,*	Education
Greenleaf, Charles Hunt,	*Palo Alto,*	Rom. Lang.
A. B., Stanford, 1898.		
Gregory, George W.,	*Redding,*	Law *Sp.*
Gregory, Thomas Tingey Craven,	*Suisun,*	Law
A. B., Stanford, 1899.		
Grider, Noah Centennial,	*Oakdale,*	Geology
Gridley, Kate Louise,	*Pacific Beach,*	Latin
Grigsby, John Livingston,	*San Jose,*	Law *Sp.*
Grigsby, Lilian Hardman,	*Tulare,*	English
Grimsley, George Perry,	*Topeka, Kansas,*	Geology
A. B., Ohio State Univ., 1890; A. M., 1891; Ph. D., John Hopkins, 1894.		
Grinnell, Joseph,	*Pasadena,*	Zoology
A. B., Throop Polytechnic Inst., 1897.		
Guidery, Myrtle,	*Oroville,*	Latin
Guild, Bertha,	*Hilo, Hawaii,*	Education *Sp.*
Gundrum, Frederick Fretageot,	*Riverside,*	Physiology
Gunn, Nelson Trowbridge,	*Butte, Mont.,*	English *Sp.*
Haag, Eugenie Marie,	*Palo Alto,*	German
Hadden, Mary Anne,	*Palo Alto,*	Romanic Lang.
Hadley, Roy Overman,	*New Whatcom, Wash.,*	English
Haehl, Harry Lewis,	*San Francisco,*	Geology
Hagmayer, Emilie Catherine,	*Cloverdale,*	German
Hahn, Maud,	*Portland, Ore.,*	History
Hale, Alice Stanford,	*Redlands,*	History
Hale, Edyth Mae,	*Salt Lake City, Utah,*	English
Hale, Robert Taylor,	*Alameda,*	Mathematics

Haley, Percis Coons, *Palo Alto,* Education *Sp.*
Hall, Elmon Lawrence, *Yokohama, Japan,* Chemistry
Hall, Evelyn Hallam Movius, *Palo Alto,* Rom. Lang. *Sp.*
Hall, Harold, *San Francisco,* Mechanical Eng.
Hall, Hubert Harry, *San Jose,* Civil Eng.
Hall, Laura, *San Diego,* History
Hall, Whipple Spear, *Oakland,* Law
Halley, Albert Smith, *Rapid City, S. D.,* Geology and Mining
†Halsey, William Clark, *Phoenix, Ariz.,* Drawing
Hamilton, Addie Louise, *Hollister,* Latin
Hamilton, Frank Dana, *Santa Clara,* Education *Sp.*
Hamilton, Henry Liberty, *Palo Alto,* Geology
Hamilton, Joseph Reuben, *King's City,* English
Hamilton, Ralph Alexander, *Riverside,* Greek
Hamilton, Thomas, *San Diego,* Economics
Hamilton, Walter Raleigh, *Palo Alto,* Civil Eng.
Hamlin, Helen Hale, *Sierraville,* Education *Sp.*
Hammerson, Alice Louise, *Belmont,* German
Hammond, Florence Gertrude, *San Jose,* English
Hammond, Peter Homer, *Palo Alto,* Latin *Sp.*
Hampson, Alfred Aubert, *Washington, D. C.,* Law
Hampson, Joseph Hale, *Washington, D. C.,* Geology and Mining
Hardison, Augusta, *Santa Paula,* English
Hardy, Eleanore Streeter, *La Crosse, Wis.,* History
Hardy, Samuel Percy Llewellyn, *Oakland,* Physiology
Harkins, Charles Lorin, *Menlo Park,* Chemistry
Harkins, Edward Castelar, *Menlo Park,* Mathematics
Harkins, Mary Santa Barbara, *Menlo Park,* History
Harper, Emile Sherwood, *Waddington,* English *Sp.*
Harris, Abe Perry, *San Jose,* Law
Harris, Blanche, *San Francisco,* English
Harris, May, *San Francisco,* History
Harris, Rosalie, *San Francisco,* English
Hart, Ethel Terry, *Redlands,* Rom. Lang.
Hart, Frank Russel, *Pacific Grove,* Physiology
Harter, Lloyd Elliott, *San Jose,* Economics
Hartnell, Ella Rachel, *Salinas,* English
Harwood, Henry Gordon, *Redwood City,* Psychology
A. B., Stanford, 1896; A. M., 1897.
Haskell, Jessie Judson, *Bradford, Pa.,* History
Haskell, Nathan Adolphus, *San Jose,* Philosophy

† Died February 11, 1901.

Hatch, Everett Hamilton, *Napa,* Mathematics
Hathorne, Eleanor Hollingsworth, *Barre, Mass.,* History
Hathway, Anita Monarch, *San Luis Obispo,* History
Hatton, Charles Walter, *Napa,* Law *Sp.*
Haub, Hattie Dora Frances, *Santa Rosa,* Physiology
Hauverman, Cornelius Duane, *Banning,* Chemistry
Hawley, Lee Carroll, *Saticoy,* Education
Hayden, Sara Davis, *Tempe, Ariz.,* History
Hays, Willis Barnum, *Pasadena,* German
Healey, John Edward, *Ventura,* History
Heaslip, Cirvilla May, *Los Angeles,* English
Heinemann, Ada Julia, *Los Angeles,* Physiology
Heller, Edmund, *Riverside,* Zoology
Helwig, Lester Henry, *North Bloomfield,* Mining Eng.
Hendrick, Mary Emma, *Los Angeles,* English
Hendy, Ethel Anita, *San Francisco,* History
Henley, Arthur Sidney, *Ukiah,* Geology and Mining
Henriksen, Martin Emil, *Handrup, Denmark,* Zoology
Henry, Helen Natalie, *Canton, China,* English
Hensey, William Henry, *Farmingdale, Ill.,* English
Henzel, Ida Bell, *San Francisco,* Latin
Herold, Ada Elizabeth, *San Jose,* History
A. B., Stanford, 1897.
Herre, Albert William Christian Theodore, *Springfield, Ill.,* Botany
Herron, George Merrick, *Napa,* Mathematics
Herzinger, Leo Agnes, *Ouray, Col.,* English
Hess, Frank L., *Visalia,* Geology and Mining
Hewlett, George, *San Francisco,* Law
Heywood, Florence, *Indianapolis, Ind.,* English
Hicks, Alden Rhodes, *Palo Alto,* Law
Higgins, Alice Aileen, *Kansas City, Mo.,* English
Higgins, Margaret May, *Astoria, Ore.,* English *Sp.*
Hill, Bessie Florence, *Portland, Ore.,* English
Hill, Edith Abbie, *Redlands,* German
Hill, Elizabeth Gertrude, *Red Wing, Minn.,* Latin
A. B., Univ. of Chicago, 1895; A. M., Stanford, 1901.
Hill, Harrison Wesley, *Redlands,* Geology
Hilts, Roy Wilson, *San Jose,* Chemistry
Hinman, Frank, *Portland, Ore.,* Physiology
Hobson, Edna Mary, *Eastland,* English
A. B., Stanford, 1901.
Hodge, Mary Ashnum, *San Diego,* Physiology

Hoerle, Janet Elizabeth,	*Johnstown, Pa.,*	English
Hogue, Clara Elizabeth,	*Santa Paula,*	Physiology
A. B., Stanford, 1901.		
Hogue, Helen May,	*Albany, Ore.,*	German
Hohl, Leonard Louis,	*Cherokee,*	Civil Eng.
Holbrook, Charles Edmund,	*Onawa, Ia.,*	Law
Holden, Frances Cooke,	*Santa Ana,*	Education
Holley, Harry Hall,	*Palo Alto,*	Geology
Holloway, Edith Hilda,	*Helena, Mont.,*	History
Holly, Theodora H.,	*Palo Alto,*	Drawing *Sp.*
Holman, Fred Sanderson,	*Willits,*	Romanic Lang.
Holmes, Helen Lathrop,	*Tacoma, Wash.,*	English
Holmes, John Elmer,	*Tacoma, Wash.,*	Chemistry
Holmquist, Hjalmar Edwin,	*Redwood City,*	Law
Holt, Grace,	*San Jose,*	English
Holt, William Armfield,	*San Jose,*	Physiology
Holway, Ruliff Stephen,	*San Jose,*	Education
Hood, Florence Mifflin,	*Baltimore, Md.,*	History
Hood, Frederick Donald,	*Palo Alto,*	Mechanical Eng.
Hoover, Theodore Jesse,	*Palo Alto,*	Geology
Hopper, Florence,	*Los Angeles,*	Latin
Hopper, Leona May,	*Palo Alto,*	English
Hopper, Maximillian Duff,	*Del Rey,*	Physics
Horn, David Marshall,	*Hornbrook,*	Chemistry
Horr, Marrion Augusta,	*Santa Clara,*	History
Hosmer, Theodore Goodman,	*Palo Alto,*	Law
Hough, Ernest Ellsworth,	*Fairfield, Ia.,*	Education
Howard, Delle,	*Cloverdale,*	History
Howard, Elva,	*Cloverdale,*	Physiology
Howard, Harold Shafter,	*Oakland,*	Economics
Howard, Sarah Gates,	*Palo Alto,*	Economics
A. B., Vassar, 1889.		
Hubbard, Horace Clarence,	*Los Angeles,*	History *Sp.*
Hudson, Albert Potts Hill,	*Tacoma, Wn.,*	Economics
Hudson, William George,	*Watsonville,*	Law
Hughes, Robert James,	*Merced,*	Electrical Eng.
Hull, Angus Clifton,	*Aurora, Ill.,*	Greek
Hummel, Redolpho Braun,	*Smith's Ferry, Pa.,*	English *Sp.*
Hunter, Thomas Benton, Jr.,	*Washington, D. C.,*	Civil Eng.
Hurlburt, May,	*Seymour, Conn.,*	Economics
Hurlbut, Edward Harwood,	*Redwood City,*	Law
Hyatt, Inez,	*Riverside,*	Mathematics

Hyde, James Macdonald,	*Palo Alto,*	Geology
Hyde, Lillian Seraphine,	*Palo Alto,*	History
Hyde, Mary Elizabeth,	*Palo Alto,*	History
Hyde, Otis Edwin,	*Cupertino,*	Drawing
Hynding, Cecelia Helena,	*Redwood City,*	Education
Ibs, Ella,	*San Diego,*	Physiology
Ibs, Matilda,	*San Diego,*	English
Iijima, Eitaro,	*Tokio, Japan,*	Geology
Illingsworth, James Franklin,	*North Ontario,*	Zoology
B. S., Pomona Coll., 1900.		
Irish, John Peck, Jr.,	*Oakland,*	Economics
Iriya, Matthew Etsutaro,	*Nagoya, Japan,*	Economics
Izumi, Akira,	*Hokkaido, Japan,*	Economics
Jackson, Byron Nicholson,	*Wilkesbarre, Pa.,*	Geology
Jacobs, George Clarence,	*Merced,*	Civil Eng.
James, Carlton Cheney,	*Cucamonga,*	Civil Eng.
Jarnick, Joseph,	*Almond, Wis.,*	Latin
A. B., Stanford, 1900.		
Jeffers, Granville Bond,	*Bloomington, Ill.,*	Education
Jensen, Peter Joseph,	*Provo, Utah.,*	Education
Jio, Marmoru,	*Tokio, Japan,*	Electrical Eng.
B. S., Univ. of Kansas, 1896.		
Johnson, Henry Roland,	*Washington, D. C.,*	Geology
Johnson, John Everett,	*San Marcial, Mex.,*	English
Johnson, Mae Louise,	*San Bernardino,*	Latin
Johnston, John Leslie,	*Redwood City,*	Law
Joiner, Alice,	*Polo, Ill.,*	English
Joiner, Charles Henry,	*Polo, Ill.,*	Economics
Jollyman, Josiah Pickard,	*Cupertino,*	Electrical Eng.
Jones, Augustine,	*College Park,*	Electrical Eng.
Jones, Edgar Axton,	*Eureka,*	Law
Jones, Herbert Coffin,	*College Park,*	Law
Jones, Oliver George,	*Denver, Col.,*	Law *Sp.*
Jordan, Harold Bowen,	*Palo Alto,*	Geology and Mining
Joy, Alexander Cartwright,	*Porterville,*	English *Sp.*
Kaiser, Charles Emerson,	*Reno, Nev.,*	Electrical Eng.
Kalloch, Belle,	*San Francisco,*	English
Kane, Emilie Marion,	*San Francisco,*	History
Karr, Frank,	*Heyworth, Ill.,*	Law *Sp.*
Kehrlein, Emil Valentine, Jr.,	*San Francisco,*	Geology
Keiser, Emelie Caroline,	*San Jose,*	Physiology
Keith, Royden James,	*Chicago, Ill.,*	Latin

Keller, Clara Drusila,	*San Bernardino,*	German
Kellogg, Charles Mitchell,	*Emporia, Kansas,*	Botany
Kellogg, Emma,	*Palo Alto,*	English *Sp.*
Keniston, Lucia Nichols,	*Stockton,*	Mathematics
Kennedy, Karl Forsythe,	*San Jose,*	Law
Kennedy, Milo Russell,	*Arabella,*	Physiology *Sp.*
Kenney, Charles Edmond,	*Palo Alto,*	Mining Eng. *Sp.*
Kent, Ava Ethel,	*Pacific Grove,*	Physiology
Kessler, Harvey Hall,	*El Cajon,*	Chemistry *Sp.*
Kidder, Mary Margaret,	*Pasadena,*	History
Kimball, Alice Windsor,	*Redlands,*	English
Kimball, Elsie,	*Palo Alto,*	German
Kimball, Rufus Hatch,	*Pasadena,*	Economics
Kimball, Ruth Laird,	*Redlands,*	English
Kimball, Sherman,	*Pasadena,*	Chemistry
Kimble, May G.,	*Los Angeles,*	Chemistry
King, Annie Rose,	*Sacramento,*	History
King, James Seaman,	*Ontario,*	History
King, Mabel Lyda,	*San Luis Obispo,*	Rom. Lang. *Sp.*
Kingery, William H.,	*McMinnville, Ore.,*	Education *Sp.*
Kingsbury, Susan Myra,	*San Francisco,*	History
A. B., Univ. of Pacific, 1890; A. M., Stanford, 1899.		
Kip, Kathryn Romer,	*San Francisco,*	English
Kirkpatrick, Grace Fleming,	*Palo Alto,*	Education
Klaine, Marie Ludie,	*San Jose,*	German
Klamt, Augustus Joseph,	*Olean, N. Y.,*	Geology
Knapp, Gertrude,	*Tehachapi,*	Physiology
Knapp, James Edmund,	*Palo Alto,*	Chemistry
Knepper, Earl H.,	*Los Angeles,*	Geology
Knepper, Jessie,	*Los Angeles,*	Mathematics
Knight, Robert Bruce,	*Henderson, Ky.,*	Law
Knutti, John Gottlieb,	*Fairmont, W. Va.,*	German
A. B., West Virginia Univ., 1897.		
Koda, Kisatsuchi,	*Yamaguchi, Japan,*	Economics
Koerber, Lillie Louise,	*San Jose,*	German
Koontz, James Alva,	*Palo Alto,*	English
Kraft, Augusta Chita,	*San Diego,*	German
Kroeck, Louis Samuel,	*Los Angeles,*	Physiology
B. S., Univ. of Pacific, 1895; A. M., Stanford, 1897.		
Kuechler, Henry Norbury,	*Palo Alto,*	Civil Eng.
B. S., Illinois College, 1896.		
Kuhn, Harold Phillip,	*Kansas City, Mo.,*	Physiology
Kuma, Toshi-yasu,	*Tokio, Japan,*	Education

Kummer, Blanche,	*San Jose,*	English
Kummer, Grace Olivia,	*San Jose,*	Romanic Lang.
Kuwana, Shinkai Inokichi,	*Hukuoka-ken, Japan,*	Zoology
	A. B., Stanford, 1899.	
Laird, Anna May,	*Montalvo,*	Latin
Lamb, Porter Emerson,	*Los Angeles,*	Geology
Lanagan, James Francis,	*Denver, Col.,*	Latin
	A. B., Stanford, 1900.	
Lane, Ernest Allen,	*Menlo Park,*	Law
Lane, Fulton,	*Seattle, Wash.,*	Economics
Langnecker, Harry Leslie,	*New Brighton, Pa.,*	Physiology
Lathrop, Helen,	*Oakland,*	English
Lathrop, Laura Myrtle,	*Hollister,*	Botany
Lathrop, Winnona,	*Hollister,*	History
Lavayea, Grace White,	*Minneapolis, Minn.,*	Latin
Laveaga, Adolph Centennial,	*Winnemucca, Nev.,*	Economics *Sp.*
Lawrence, George Richardson,	*Monrovia,*	Geology
Lawry, George Vance,	*Redding,*	Law *Sp.*
Laws, Henry,	*Honolulu, H. I.,*	Mathematics
Lawson, Frank May,	*Washington, D. C.,*	Zoology
Lawson, Lawrence Miller,	*San Francisco,*	Civil Eng.
Ledyard, Benjamin Cory,	*San Jose,*	Physiology
Lee, André Edward,	*San Francisco,*	Physiology
Lee, Howard Shields,	*Denver, Col.,*	Mechanical Eng.
Le Fort, Peter von,	*Palo Alto,*	Romanic Lang.
Leib, Frank Allen,	*San Jose,*	Law
Leib, Roy Chilton,	*San Jose,*	Law
Leigh, Hamilton Bowie,	*Oakland,*	Law *Sp.*
Lemmon, Allen Bosley, Jr.,	*Santa Rosa,*	Geology
Lemmon, Fred Gage,	*Santa Rosa,*	Law
Leonard, Edward Michael,	*Aptos,*	Law
	A. B., Santa Clara Coll., 1900.	
Leonard, Maud Bernice,	*Spokane, Wash.,*	Hygiene *Sp.*
Levy, Leon Gambetta,	*San Francisco,*	Physiology
Lewis, Alvin Francis,	*Mayfield,*	Geology
Lewis, De Lancey,	*San Jose,*	Law
Lewis, Howard Milton,	*Great Falls, Mont.,*	English
Lewis, John Morgan,	*Wailuku, Maui, H. I.,*	History
	A. B., Marietta Coll., 1893.	
Lewis, Winford Lee,	*Gridley,*	Chemistry
Leyshon, Arthur,	*Kingston, Pa.,*	Geology
Liddle, Carrie Walker,	*San Jose,*	Education
Lloyd, Edith,	*Ben Lomond,*	English

Lockey, Mary Ishbel,	*Helena, Mont.*,	English
Lockey, Richard, Jr.,	*Helena, Mont.*,	Law
Lockwood, Lot Dean,	*Brownsville*,	Law *Sp.*
Loeser, Katherine Foster,	*Palo Alto*,	Chemistry *Sp.*
Longley, John Artemas,	*Palo Alto*,	Rom. Lang.
A. B., Stanford, 1896; A. B., Harvard, 1896.		
Loofbourow, Leon L.,	*Salt Lake City, Utah*,	Philosophy
Lord, Charlotte Mable,	*Palo Alto*,	History
Loser, Lena Louise,	*Aurora, Ill.*,	Latin
Losse, Vivian Beatrice,	*San Jose*,	English
Lousley, Vincent Daniel,	*Santa Barbara*,	Chemistry
Lowenthal, William Baum,	*Livermore*,	Law
Lucas, Harry Clifford,	*Santa Cruz*,	Law
Luce, Edgar Augustine,	*San Diego*,	Law
Luck, Ottmar Henry,	*Aurora, Ill.*,	Law
Lull, George, Jr.,	*Palo Alto*,	Law
Lullman, Rebecca Christiana,	*Danbury, O.*,	English
A. B., National Normal Univ , 1900.		
Lullman, Regina Rebecca,	*Danbury, O.*,	German
A. B., National Normal Univ., 1900.		
Lunt, James Chase,	*San Francisco*,	Electrical Eng.
Lutgerding, George H.,	*Phoenix, Ariz.*,	Law
Lutts, Frances Eldena,	*Willows*,	Latin
Lynn, Ellen Utley,	*Cambria*,	English
A. B., Stanford, 1901.		
Lyons, Irving Henry,	*San Francisco*,	Economics
Lyons, Louis Spitz,	*San Francisco*,	Physiology
Mabrey, Eli Nelson,	*Palo Alto*,	Law
Mabury, Laura Nevada,	*San Jose*,	English
McCabe, Harry Manning,	*San Jose*,	Geology *Sp.*
McCaughern, John Casey,	*Hinsdale, N. H.*,	Economics
McComas, Rush,	*Pomona*,	Law
McComish, Charles Davis,	*Indiana, Pa.*,	English
McComish, Ralph Clinton,	*Indiana, Pa.*,	Law
McConnell, Henry,	*Portland, Ore.*,	Civil Eng.
McCormick, Manson Fielding,	*Fresno*,	Law
McCracken, Mary Isabel,	*Oakland*,	Physiology *Sp.*
McCrea, Samuel Pressly,	*Palo Alto*,	History
B. S., Univ. of Arizona, 1900.		
McCroskey, Edith Irene,	*Hollister*,	Mathematics
A. B., Pacific Methodist College, 1900.		
MacDonald, Perry Wallace,	*Porterville*,	Law
McDonnell, Edward Leon,	*Wattsburg, Pa.*,	Latin

McDougald, Louise, *Stockton,* Rom. Lang.
McDougald, Mary E., *Stockton,* English
McDowell, John Ezra, *Ashland, Ohio,* Law
A.B., Stanford, 1900.
McDowell, Percy, *Ashland, Ohio,* Economics
McElnay, Elsie, *Santa Rosa,* Physiology
McElroy, Frank Garfield, *Ottumwa, Ia.,* Law *Sp.*
McFadden, Elizabeth, *Santa Ana,* Physiology
McFadden, John Andrew, *Santa Ana,* Chemistry
McFadden, Ralph John, *Placentia,* Geology
McFadden, Thomas Lewis, *Placentia,* Law
A. B., Stanford, 1900.
McGee, Alice Ben, *Denver, Col.,* Rom. Lang.
McGilvray, Alexander Beaton Carey, *Palo Alto,* Law *Sp.*
McKee, Georgia, *San Jose,* Rom. Lang.
A. B., Stanford, 1901.
Maclaren, Glover Reeve, *San Jose,* Economics
McLaughlin, Roy Parmelee, *Vallejo,* Geology
McLellan, Ethel Cora, *San Diego,* History
McLeod, Roderick George, *Winona, Minn.,* Education
McManis, John T., *Palo Alto,* Education
A. B., Stanford, 1897.
McMurphy, James Ira Wilson, *Albion,* Zoology *Sp.*
McNaught, Carl Shelby, *Spokane, Wash.,* Geology
McNaught, Hector Cowan, *Denver, Col.,* Chemistry
McNee, Alexander Edward, *San Francisco,* Physiology
McNeil, Arthur James, *West Side,* Civil Eng.
McQuaid, Lois Ethel, *Vallejo,* History
McWethy, James Le Roy, *Aurora, Ill.,* Physiology
McWethy, William Ernest, *Rialto,* Electrical Eng.
Madden, Martha Elizabeth, *Milton, Pa.,* Economics
Madsen, Peter, *Oakland,* German *Sp.*
Maloy, Walter C., *San Jose,* Economics
Manning, William Albert, *Salem, Ore.,* Mathematics
A. B., Willamette Univ., 1900.
Mansfield, James Whimster, *Palo Alto,* Chemistry
Manwaring, Clarence Tryon, *Meriden, Conn.,* Law
Maples, Edward Thompson, *Bakersfield,* Economics
Maples, Roscoe William, *Berkeley,* Economics
Marrack, Cecil Mortimer, *San Francisco,* English
Martin, Adelin, *Amboy, Wash.,* Rom. Lang. *Sp.*
Martin, Dock K., *Waco, Texas,* History
B. S., Baylor Univ., 1900.

Martin, Helen Edmona,	*Omaha, Neb.*,	German *Sp.*
Martin, Homer,	*Oregon City, Ore.*,	Latin
Martin, Mary Viola,	*Woodland*,	German
Martin, Percy Alvin,	*Chautauqua, N. Y.*,	Rom. Lang.
Marx, Joseph,	*Pasadena*,	Chem. Eng.
Mason, Gertrude Helen,	*San Jose*,	English
Ph. B., Univ. of Michigan, 1876; Ph. M., 1889.		
Mathews, Ellen,	*Los Angeles*,	Zoology
Mathews, Julia	*Los Angeles*,	English
A. B., Stanford, 1901.		
Matthews, Helen Lucy,	*Salem, Ore.*,	History
Maulsby, Lulu Arminta,	*Santa Barbara*,	English
Maw, Charles Edward,	*Plain City, Utah*,	Education
Mayeda, Frank Kinichiro,	*Tokio, Japan*,	Zoology
Mekeel, Joshena Stone,	*Santa Barbara*,	Physiology
Melone, Nettie E.,	*Saratoga*,	German
Meredith, Mary California,	*San Luis Obispo*,	Latin
Merriam, Bertha Virginia,	*Twin Oaks*,	Latin
Merriam, Cyrus Lincoln,	*Denver, Col.*,	Chemistry
Merrill, John Albert,	*San Francisco*,	Law
Merritt, Albert Newton,	*Del Rey, Ill.*,	Latin
A. B., Battle Creek Coll., 1899.		
Merritt, Mary Elizabeth,	*Woodland*,	Rom. Lang.
A. B., Stanford, 1901.		
Merritt, Rowena,	*Woodland*,	German
Metzler, Anna,	*Santa Cruz*,	German
Meyer, Catherine Bertha,	*Santa Rosa*,	German
A. B., Stanford, 1901.		
*Meyer, Raymond Daniel,	*Carbon, Wyo.*,	Civil Eng.
A. B., Stanford, 1900.		
Miller, Clara Marie,	*Tempe., Ariz.*,	German *Sp.*
Miller, Earl Everett,	*Vinton, Ia.*,	Law
Miller, Guy Chester,	*Salem, Ore.*,	English
Miller, Joseph Adams, Jr.,	*Austin, Nev.*,	Chemistry
Miller, William John,	*College Park*,	Geology
B. S., Univ. of Pacific, 1900.		
Mills, Ada Sophia,	*Cheyenne, Wyo.*,	English
Mills, Ethelwyn,	*Oakland*,	Economics
Mills, Helen Hall,	*Menlo Park*,	Entomology
Mills, Louis David,	*Menlo Park*,	Geology
Miner, Adalaide M.,	*Pomona*,	History
Mini, Joseph, Jr.,	*Los Gatos*,	Electrical Eng.

* Work completed Summer, 1900.

Mirsky, Minnie M., *San Francisco,* Greek
Misner, Francis Osborne, *Palo Alto,* Mechanical Eng. *Sp.*
Misner, Walter, *Buffalo, N. Y.,* Geology and Mining
Mitchel, Edgar Lillian, *Ferndale,* Education
Mitchell, John Pearce, *Providence, R. I.,* Chemistry
Mitchell, Paul Lamar, *Harrison Sta., Miss.,* English
Mitchell, William Ellis, *New York, N. Y.,* Geology
Miyake, Hanzaburo, *Okayama, Japan,* Chemistry
Moeller, Albert Lucien, *San Francisco,* Chemistry
Monteith, Andrew Ector, *San Francisco,* History
Montgomery, Charles Dudley, *Cedar Point, Kansas,* Law
B. S., Kansas State Agr. Coll., 1900.
Montgomery, Dewitt, *Placentia,* English
Montgomery, Seymour Thomas, *San Jose,* Law
Moody, Fay Frances, *Junction City, Kansas,* Rom. Lang. *Sp.*
Moore, Grace Ethel, *Grangeville, Idaho,* Latin
Moore, Grant Hathaway, *Los Gatos,* Civil Eng.
Moore, Jessie Archibald, *Los Angeles,* Chemistry
A. B., Stanford, 1901.
Moore, Luman Gordon, Jr., *Kinsman, O.,* Physiology
Moran, Hugh Anderson, *Palo Alto,* Latin
Mordecai, George Washington, Jr., *Madera,* Law
Morehead, Alma, *Chico,* Mathematics
Moreing, Helen Sue, *Stockton,* German
Morgan, Winifred June, *Oakland,* Physiology
Mori, Jame, *Tokio, Japan,* History
Moriarty, Willis Harrison, *Emlenton, Pa.,* Law
Morin, William James, *Three Rivers, Mass.,* Rom. Lang.
Morris, Earl Leonard, *Santa Ana,* Zoology
Morris, William Alfred, *Salem, Ore.,* History
Morrison, Arthur Robert, *Denver, Col.,* Law
Morrison, Harry Lee, *Denver, Col.,* Geology
Morrison, Sara Graham, *Sharon, Pa.,* History
Morrison, William Gentry, *Denver, Col.,* Law
Morrow, William Carr, *Portland, Ore.,* History
Morse, Ada Berenice, *Santa Clara,* English
Moss, Harold Rae, *San Mateo,* Greek
Moule, Irene Helen, *San Jose,* English
Moulton, Dudley, *Palo Alto,* Zoology
Moulton, Josephine, *Campbell,* English
Moulton, Lina, *Palo Alto,* English
Mourot, Louise Anna, *Redwood City,* Rom. Lang.

Muckleston, Harold Struan, *Perth, Ontario, Canada,* Greek
A. B., Trinity Univ., Toronto, 1899; A. M., Stanford, 1900.
Mugler, Eleanor Caroline, *Merced,* Botany
Muir, John Church, *Los Angeles,* Civil Eng. *Sp.*
Muller, Léonard Gérard du Celliée, *Nymegen, Holland,* R. Lang.
*Mullins, Joanna Muriel, *Mayfield,* History
A. B., Stanford, 1900.
Murgotten, Francis Clark, *San Jose,* Class. Phil.
Murphy, Chester Griffin, *Salem, Ore.,* Law
A. B., Stanford, 1900.
Murphy, Cornelius Ramund, *San Francisco,* Law
Myers, Estelle, *St. Louis, Mo.,* German
Naftzger, Frederick Earle, *Los Angeles,* English
Nagel, Laura Ingeborg, *Davenport, Ia.,* History
Nangle, Francis Eaton, *Wayne, Nebr.,* History *Sp.*
Naramore, Chester, *Campbell,* Geology
Needles, Edna A., *Palo Alto,* English *Sp.*
Nelson, Laura C., *San Jose,* German *Sp.*
Newburg, Mervyn Jacobs, *San Bernardino,* Chemistry
Nichols, Frances, *Santa Ana,* English
Nichols, Percy E., *San Jose,* Geology
Nickel, Louis, *Del Norte, Col.,* Geology
Nicolas, Virginia Noelie, *Fullerton,* Rom. Lang.
Nightingill, Frank William, *Clovis,* English *Sp.*
Nikirk, Frank Austin, *San Jose,* Civil Eng.
Nims, Grace, *Pacific Grove,* Physics
Nishikawa, Kotaro, *Hikone, Omi, Japan,* Economics
Noland, Daniel Vorhees, *Riverside,* Economics
Noon, Grace Agnes, *Cambridge, Mass.,* Physiology
North, Wheeler Oren, *Los Angeles,* Geology
Nourse, Bayard Everheart, *Santa Ana,* Physiology
Nourse, John Thomas, Jr., *Santa Ana,* Law
A. B., Stanford, 1900.
Nutter, Edward Hoit, *San Francisco,* Geology
Oakford, Benjamin Palmer, *Palo Alto,* Law
O'Farrell, Edith, *San Diego,* English
Offield, Lorenzo Adolphus, *Santa Clara,* Latin
A. B., Stanford, 1894.
Ogier, Adelaide Reid, *San Jose,* History
Olshausen, Bruno Adolph, *Los Angeles,* Chemistry *Sp.*
O'Neal, Josiah Philip, *Fall Brook,* Mechanical Eng.
Osborn, Lucy Ellery, *Watsonville,* English

* Work completed Summer, 1900.

Osborne, John Walter,	*Palo Alto,*	Psychology
Ownby, Wade Hampton,	*Monticello, Ill.,*	Law *Sp.*
Page, Alexander Griffith,	*Palo Alto,*	Physiology
Page, Clarence Winslow,	*Berkeley,*	Physiology
Page, Ernest Stoddard,	*Berkeley,*	Law
A. B., Stanford, 1900.		
Page, Joseph Henry,	*Ellensburg, Wash.,*	Law
Pahl, August Julius,	*Stockton,*	Electrical Eng.
Palen, Matthew Addison,	*Colton,*	Law
Palmer, Edward Augustus,	*Uncasville, Conn.,*	Psychology
Palmer, Lillian,	*San Jose,*	English *Sp.*
Palmer, Thomas Lewis Earle,	*Denver, Col.,*	Latin
Park, Robert Nym,	*Salt Lake City, Utah,*	Geology
Park, Sara Reid,	*Salt Lake City, Utah,*	French
Parker, Paul Percy,	*Salinas,*	History
Parkhurst, Minnette Ada,	*Pacific Grove,*	English
Parkin, Harry Dravo,	*New Kensington, Pa.,*	Economics
Parkin, William Metcalf,	*New Kensington, Pa.,*	Geology
Parsons, Augustus Taber,	*San Jose,*	Civil Eng.
Parsons, Edith Ferris,	*San Jose,*	English
Passmore, Irvin,	*Grampian, Pa.,*	Classical Phil.
A. B., Stanford, 1901.		
Patterson, Frances Doremus,	*East Orange, N. J.,*	History
A. B., Stanford, 1901.		
Patterson, Letitia,	*East Orange, N. J.,*	English
A. B., Stanford, 1901.		
Patterson, Mabel,	*San Jose,*	Botany
Patterson, William Donald,	*Centreville,*	Law
Patterson, William John,	*Pittsburg, Kansas,*	Mining Eng.
Patton, Alice Ida,	*Gilroy,*	Latin
Peck, Anne Earle,	*Palo Alto,*	Rom. Lang.
A. B., Stanford, 1898.		
Peckham, Elizabeth Anne,	*Watsonville,*	Physiology
Peckham, James Benjamin,	*San Jose,*	Law
Percival, Harold Spencer,	*Aspen, Col.,*	History
Perrin, Anita Butler,	*Stockton,*	English
Perrin, Arch,	*San Jose,*	History
Perry, Irvin David,	*Colton,*	Education
Perry, Katharine Ama	*Monterey,*	Education
Perry, Laura Cushman,	*San Francisco,*	Rom. Lang.
Peter Charles Augustus, Jr.,	*Prescott, Ariz.,*	Mechanical Eng.
Peterson, Ida May,	*Middletown,*	History
Peterson, Laura Amelia,	*Salinas,*	Education

Peterson, Mary Hulda,	*Fowler,*	History
Pfouts, Watson Farr,	*Butte, Mont.,*	Geology *Sp.*
Phelps, Mary Mabel,	*San Jose,*	English
A. B., Stanford, 1901.		
Phillips, Maybelle Aveline,	*Ontario,*	Latin
Piercy, Viola Carrie Carmen,	*San Francisco,*	Rom. Lang. *Sp.*
Pierson, Charles J.,	*Redwood City,*	Zoology
A. B., Stanford, 1897.		
Pillot, Mary Augusta,	*San Jose,*	History
Pitcher, Yrene,	*Dixon,*	Mathematics
Pitner, Paul Jerome,	*Evanston, Ill.,*	Geology
Plagemann, Oscar Fred,	*San Francisco,*	Geology
Pleak, Raymond Lucas,	*Greensburg, Ind.,*	English
Pleasants, Emma Shaw,	*Pottsville, Penn.,*	Hygiene
B. S., Wellesley College, 1890.		
Plecher, Andrew,	*Belmont, N. C.,*	Physics
Plowhead, John Jacob,	*Middleton, Ida.,*	Law
A. B., Univ. of Nebraska, 1900.		
Plumb, Preston B.,	*Emporia, Kans.,*	Economics
Pollard, Claude,	*Saratoga,*	Law
Pollock, Adelaide Lowry,	*Stockton,*	Physiology
Porter, Mabel,	*Calistoga,*	Latin
Post, Mary Helen,	*Santa Clara,*	Latin
B. L., Smith College, 1896.		
Potter, Eliot Gray,	*San Francisco,*	Chemistry
Potter, Elbert King,	*Anaheim,*	Law
Powell, Fred Wilbur,	*Palmer, Mass.,*	Economics
Powers, Nelson Charles,	*Syracuse, N. Y.,*	German
Prentice, Edwin Whitman,	*San Francisco,*	Civil Eng.
Preston, Archibald Edward,	*Santa Clara,*	Geology and Mining
Prisk, Charles Henry,	*Grass Valley,*	English *Sp.*
Pursell, Fred Josiah Colter,	*Napa Junction,*	Law
Purvine, Elmer Walter,	*Zena, Ore.,*	English
A. B., McMinnville Coll., 1891.		
Quayle, Charles,	*Oakland,*	Law
A. B., Stanford, 1900.		
Rademaker, Aida Eleanor,	*San Francisco,*	Latin
Raitt, Charles Burton,	*San Bernardino,*	Civil Eng.
Ramsay, Sophia Georgina Crawford,	*Palo Alto,*	History
A. B., Stanford, 1901.		
Randall, Philip Green,	*Medford, Mass.,*	English
A. B., Harvard, 1899.		
Randall, William Ramsey Dows,	*Santa Rosa,*	Physiology

Randolph, Flora Albertine,	*Palo Alto,*	Botany
Rawdon, Blanche Louise,	*Palo Alto,*	English
A. B., Stanford, 1899.		
Rawdon, Mary Ellen,	*Palo Alto,*	English
Ray, Burnham Mandan,	*Querida, Col.,*	Geology and Mining
Ray, James Clay,	*Yuba City,*	German
Ray, Lillian Emeline,	*Palo Alto,*	Physics
A. B., Stanford, 1897.		
*Raymond, Irving C.,	*Palo Alto,*	History
A. B., Stanford, 1900.		
Rea, Ernest Lloyd,	*San Jose,*	Classical Phil.
Reed, Samuel Payne, Jr.,	*Los Gatos,*	Physiology
Rees, Kelly,	*Fayetteville, Tenn.,*	Class. Phil.
Reeves, Clyde William,	*Hillsboro, Ore.,*	Geology
Reidy, Francis James,	*San Jose.,*	Chemistry
Renaud, Ralph Edward,	*Washington, D. C.,*	English
Reppy, Roy Valentine,	*Ventura,*	Latin
Reynolds, Emily Irene,	*Palo Alto,*	English
Reynolds, Kenneth Franklin,	*Irvington,*	Chemistry
Reynolds, Marion Fred,	*San Bernardino,*	History
Rhodes, Ethel,	*San Jose,*	Physiology
Rice, Edward Walter,	*Gilroy,*	Law
Rice, Jesse Albert,	*Palo Alto,*	English *Sp.*
Richards, Charles Lenmore,	*Austin, Nev.,*	Law
Richards, Charles Maynard,	*San Jose,*	Greek
Richards, Flora Valentine,	*Gridley,*	Mathematics
A. B., Stanford, 1896.		
Richards, Irmagarde,	*Spokane, Wash.,*	Greek
Richardson, Karl Asa,	*Worcester, Mass.,*	Mathematics
Riddell, Charles Francis,	*Coronado,*	Economics
Rider, Ella Moore,	*Napa,*	Latin
A. B., Stanford, 1901.		
Ripley, Lila Irene,	*San Jose,*	English
Riste, Edgar Carver,	*Cheney, Wash.,*	Law *Sp.*
Ritchie, Agnes Sibbald,	*St. Helena,*	History
Ritchie, William,	*Fields Landing,*	Law
Rittenhouse, Emmet Cloyd,	*Ashland, O.,*	History
Rittenhouse, Floyd Omer,	*Ashland, O.,*	History
Ritter, Carlton M.,	*Chico,*	Education
Ritter, Ovid Herbert,	*Chico,*	Latin
Rixon, Charlotte Amelia,	*Los Angeles,*	History
Roberts, Harry Lyman,	*Salt Lake City, Utah,*	Physiology

* Work completed Summer, 1900.

Roberts, Milnor, *Colorado Springs, Col.*, Geology
A. B., Stanford, 1899.
Roberts, Milnora de Beelen, *Colorado Springs, Col.*, German *Sp.*
Robinson, Calvin Laurence, *San Francisco*, Law
Robinson, Clarence Arthur, *Aurora, Ill.*, Chemistry
Robinson, Earl Clayton, *Aurora, Ill.*, Physiology
Robinson, Sarah Alice, *Oakland*, Drawing
Robinson, Walter Hall, *Snelling*, History *Sp.*
Robson, Kernan, *San Francisco*, Education
A. B., Ohio Wesleyan, 1892; A. M., Harvard, 1894; A. B., Stanford, 1901.
Rockey, Paul, *Portland, Ore.*, Mining Eng.
Roehr, Frank, *San Jose*, Law
Roesman, Thomas Jefferson, *Menlo Park*, Chemistry
A. B., Stanford, 1900.
Roscoe, William Wallace, *Upper Mattole*, Law *Sp.*
Rose, Andrew Henry, *Ontario*, English
Roseberry, Fred Thomas, *Pope Valley*, Electrical Eng.
Roseberry, Louis Heaton, *Pope Valley*, Law
Ross, Bessie Leonora, *Astoria, Ore.*, English
Ross, Hall Carlos, *Belmont*, Law
Ross, Maude Ewing, *Los Angeles*, English *Sp.*
Rosseter, Myrtle Brace, *Redwood City*, English
Roth, Emma Katharine, *Pasadena*, German
Roth, Lester Lionel, *San Francisco*, Rom. Lang.
Roth, William Philip, *Honolulu, H. I.*, Economics
Roughan, Robert, *Boston, Mass.*, Economics
Rouiller, Charles August, *Paraje, N. M.*, Chemistry
Rounds, Ida May, *Alameda*, History
Rourke, Patrick Lawrence, *San Francisco*, Law
Rowell, Bernice C., *Easton*, Mathematics
Rowell, Edna Ellen, *Easton*, Physiology
Rowell, Gertrude Frances, *Easton*, Education
Rowley, Arthur Reginald, *Portland, Ore.*, Chemistry
Rush, Frederick Winn, *Suisun*, Geology
Rush, Walter Scott, *Guthrie, Oklahoma*, Electrical Eng. *Sp.*
Rusk, Hester Dresser Babb, *Milwaukee, Ore.*, Hygiene *Sp.*
Russ, Edythe Josephine, *Ferndale*, English
A. B., Stanford, 1901.
Russell, Isaac, *Salt Lake City, Utah*, English
Ruth, Anna Frances, *Pomona*, Greek
Ryan, John Joseph, *Gilroy*, History
Ryan, Arthur Clark, *Kingston, N. Y.*, Economics
Sakuma, Charles Gonjiro, *Aichiken, Japan*, Electrical Eng.

Sanborn, George Francis, *Fruitvale,* History *Sp.*
Sandstedt, Lillian Matheldah, *Oleander,* History
Saunders, Daniel Green, Jr., *Kansas City, Mo.,* Chemistry *Sp.*
Sawyer, Frances Caroline, *San Jose,* Rom. Lang.
Scales, Henry Crowell, *De Lamar, Idaho,* Geology
Scales, Wilbert Getchell, *De Lamar, Idaho,* Civil Eng.
Schaefer, Joe Augustus, *Denver, Col.,* Chemistry
Schanck, Francis Raber, *Elsinore,* Mechanical Eng.
Schanck, Imogene Anna, *Elsinore,* Latin
Schmutzler, Charles Frederick, *San Francisco,* German
A. B., Stanford, 1898; A. M., 1899.
Schneider, Frederick, *Palo Alto,* Law *Sp.*
Schoenheit, Sophie Edith, *San Jose,* Chemistry
Schofield, Blanche Adele, *Mitchell, S. Dak.,* German
A. B., Stanford, 1901.
Schott, Franklin Tuthill, *Antioch,* Physics
A. B., Stanford, 1899.
Schulte, Walter Gustav Adolph, *San Francisco,* Physiology
Schulz, Lou Ernest, *Porterville,* Mechanical Eng.
Schulz, Roy Edwin, *Redlands,* Classical Phil.
Schwartz, Elsie Emma, *Omaha, Nebr.,* English
Schwarzkopf, Rudolph Herrmann, *Newark, N. J.,* Physiology *Sp.*
Scobey, Frederick Charles, *Denver, Col.,* Electrical Eng.
Scott, Anne Lockerby, *Pomona,* English
Scott, Carroll De Wilton, *San Diego,* Law
Scott, Mattie Marie, *National City,* English *Sp.*
Scott, Ruth Gage, *Duluth, Minn.,* English
Scoville, Harry Franklin, *Corona,* Law
Sears, Maud May, *East Oakland,* Physiology
Seeley, Carrol Carpenter, *Portland, Ore.,* Rom. Lang.
Sefton, Joseph Welmar, Jr., *San Diego,* Law
Seibert, Donald Kingsland, *San Francisco,* Law
Sell, Charles Walter, *Denver, Col.,* Civil Eng.
Senow, Hachiro, *Sendai, Japan,* Economics
Shadburne, Wade Hampton, *San Francisco,* Law
Sharpe, Howard Brookes, *Helena, Mont.,* Geology
Shaw, Bertha Mary, *San Francisco,* Rom. Lang.
Shelley, Oswald Procter, *San Jose,* Civil Eng.
Sherwood, Frances Marie, *Los Angeles,* English
Sherwood, William Ellsworth, *Ione,* Law
Shibley, Ernest Harvey, *Miller,* Mathematics
A. B., Stanford, 1900.
Shields, Harvey, *Eureka,* Electrical Eng.

Shipley, Howard Maynard, *St. Paul, Minn.*, Economics *Sp.*
Shives, Mary Ellen, *San Diego*, English
Short, Frances Elizabeth, *Wadsworth, Nev.*, Education
Sill, Alfred Bailey, *Blackfoot, Idaho*, Law
Silvey, Antone, *Elmira*, Economics
Simon, Marie, *Santa Rosa*, Physiology
Simpson, Mary Sheal, *Grand Rapids, Mich.*, English
Sindo, Michitaro, *Palo Alto*, Physiology *Sp.*
Singer, Martin, *Clarksville, Ark.*, Rom. Lang.
A. B., Arkansas Cumberland Coll., 1898.
Sisson, Louis Eugene, *Minneapolis, Minn.*, English
Skillings, Mary Ellen Covington, *Alameda*, Education
A. B., Stanford, 1900.
Skinner, Edwin Hume, *San Jose*, Rom. Lang.
Slaker, Frank Louis, *Aurora, Ill.*, Geology
Slemons, Hal Maxwell, *Monrovia*, Geology and Mining *Sp.*
Sloan, William Henry, *Palo Alto*, Physiology *Sp.*
Small, Ida Louise, *Ione*, Education *Sp.*
Smith, Edward Augustus, Jr., *Denver, Col.*, Geology
Smith, Gertrude Mary, *Campbell*, Greek
Smith, Guy Vinton, *Aurora, Ill.*, Economics
Smith, Helen Edna, *Los Angeles*, Drawing
*Smith, James Fred, *Campbell*, Education
B. S., New Hampshire Coll., 1873; A. M., Dartmouth, 1885; A. B., Stanford, 1900.
Smith, Laura, *Reno, Nev.*, Chemistry
Smith, Marion, *Aurora, Ill.*, History
Smith, Nellie May, *Palo Alto*, Physics
Smith, Paul Lavendee, *Paso Robles*, Geology
Smith, Rose Flora, *Los Angeles*, Greek
A. B., Stanford, 1897.
Smith, Sarah Rose, *San Francisco*, English *Sp.*
Smith, Stanley, *Redwood City*, Rom. Lang.
Smith, William Arthur, *Los Angeles*, Electrical Eng. *Sp.*
Snell, Joel Andrew, *Tehama*, Education
Ph. M., San Joaquin Valley Coll., 1888.
Snodgrass, Robert Evans, *Ontario*, Zoology
A. B., Stanford, 1901.
Snyder, George Samuel, *Fletcher, Wash.*, Zoology *Sp.*
Snyder, Kathrene May, *Fletcher, Wash.*, Botany *Sp.*
Sobey, Arthur Wilson, *San Francisco*, Physiology
Sobey, Christabel Rose, *San Francisco*, Chemistry
Sobey, Gifford Lyne, *San Francisco*, Physiology

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Sohler, Frank Ernest,	*Kelseyville,*	Physiology
Sohns, George W.,	*Seattle, Wash.,*	Economics
Sol, Servando,	*Santa Tecla, Salvador, C. A.,*	Mechanical Eng. *Sp.*
Soulè, Claire,	*San Bernardino,*	History
Spaulding, Milo Herrick,	*Kalispel, Mont.,*	Zoology
Spencer, Edith Emerson,	*Los Angeles,*	English
Spencer, Omar Corwin,	*Vernoma, Ore.,*	Law *Sp.*
Spinney, Earl,	*Portland, Ore.,*	Civil Eng.
Sprague, Hobart Almerin,	*Los Angeles,*	Geology *Sp.*
Spreckels, John Dolph, Jr.,	*San Francisco,*	Chemistry
Spurgeon, Cleo Mineta,	*Palo Alto,*	Zoology
Stack, William Joseph,	*Santa Cruz,*	Latin
Stager, Henry Walter,	*Palo Alto,*	Mathematics
Stancliff, David Miller,	*Edinboro, Penn.,*	Economics *Sp.*
Stanford, James Nichols,	*Olympia, Wash.,*	English
Stanford, Mildred,	*Olympia, Wash.,*	English
Starbuck, Anna Diller,	*Palo Alto,*	Philosophy
Stark, Mollie Pearl,	*Oakland,*	English
	A. B., Stanford, 1900.	
Starratt, Stanley Arthur,	*Yarmouth, N. S.,*	Physiology
Stephens, Charles Thomas,	*Denver, Col.,*	Chemistry
Stephens, Leroy Hamilton,	*San Jose,*	Class. Philology
Stephenson, Ruth Millicent,	*Sacramento,*	Greek
Stephenson, Terry Elmo,	*Orange,*	Law
Sterrett, Roger John,	*Pasadena,*	English
Stevens, Frank Asbury,	*Monticello, Ill.,*	Law
Stevens, Maude Frances,	*Oroville,*	History
Stevens, Walter Campbell,	*San Francisco,*	English
	LL. B., Cornell Univ., 1899.	
Stevenson, Archie McNicol,	*Denver, Col.,*	Law
Stevenson, Clara,	*Menlo Park,*	English
Stevenson, Howard Griffith, Jr.,	*Menlo Park,*	Chemistry
Stewart, Arthur Bonbright,	*Beaver Falls, Pa.,*	Law
Stillman, Cara.	*Palo Alto,*	English
Stillman, Minna,	*Palo Alto,*	Mathematics
Stockton, Alice Pearl,	*Madera,*	English
Stone, Clinton Erwyn,	*San Jose,*	History
Stone, Walter Corbaley,	*Palo Alto,*	Law
Storey, Thomas Andrew,	*Palo Alto,*	Physiology
	A. B., Stanford, 1896; A. M., 1900.	
Storey, Riley Clark,	*Palo Alto,*	Education
	A. B., Univ., of Michigan, 1868; LL. B., Indianapolis Law Coll., 1869.	
Stow, Charles Messer,	*Grand Rapids, Mich.,*	Greek

Strange, Bessie,	*Palo Alto,*	Chemistry
Strange, Shelby Phipps,	*Palo Alto,*	Chemistry
Strassburger, Lawrence,	*San Francisco,*	Economics
Strohm, Frank H.,	*Denver, Col.,*	Geology
Strout, Ernest Allen,	*Sebastopol,*	Geology
Stubbs, Theodora Waters,	*Reno, Nev.,*	Physiology
	A. B., Nevada State Univ., 1895.	
Studley, Clarence Knight,	*Adin,*	Education *Sp.*
Suhr, Rebecca Selena,	*San Bernardino,*	Law
Susman, Leo Henry,	*San Francisco,*	Law
Sussman, Leo I.,	*San Francisco,*	Chemistry
Swart, Frank,	*New Paris, Ind.,*	Law
Swartzlander, Joseph Slack,	*Omaha, Neb.,*	Physiology
Sweetland, Eulavelle,	*Lemoore,*	English
Sweetman, Claire Frederica,	*Billings, Mont.,*	Latin
Swindells, Charles Jay,	*Tacoma, Wash.,*	Law
Swinerton, Alfred Bingham,	*San Francisco,*	Geology
Swing, William Walter,	*San Bernardino,*	Education
Swink, Rufus Clyde,	*San Jose,*	Physics
Symonds, Nathaniel Gardner,	*Los Gatos,*	Electrical Eng.
Taber, Clara Mabel,	*Elko, Nev.,*	Mathematics
Taber, Cora Emma,	*Elko, Nev.,*	History
Talbert, Franklin Lilburn,	*Santa Clara,*	Economics *Sp.*
Talbot, Earle,	*San Francisco,*	Civil Eng.
Tanaka, Shintaro,	*Tokio, Japan,*	Economics
Tarbell, Olga S.,	*Santa Rosa,*	Zoology
Taylor, Florence,	*Steubenville, O.,*	Latin
Taylor, Henry Huntly,	*San Francisco,*	History
	A. B., Stanford, 1900.	
Taylor, John Calvin,	*San Francisco,*	Physiology
Taylor, Marion Dickie,	*Livermore,*	Latin
Taylor, Ruth,	*Steubenville, O.,*	History
Taylor, Stuart Le Roi,	*Palo Alto,*	Chemistry
Taylor, Wilder,	*Eureka,*	Geology *Sp.*
Terrell, Charles Leroy,	*San Francisco,*	Law
Tetro, Maude Julia,	*Palo Alto,*	Drawing
Thayer, Edward Irving,	*Denver, Col.,*	Law
Thayer, Ida May,	*Bradford, Mass.,*	English *Sp.*
Theobald, Harry Couch,	*Palo Alto,*	English
	A. B., Stanford, 1900.	
Thies, Arno Grote,	*Denver, Col.,*	Geology
Thiriot, George Milton,	*Santa Clara,*	Law

Thomas, Charles Wilbur,	*Woodland,*	Greek
Thomas, George M.,	*Ukiah,*	Economics
Thomas, Micajah Anderson,	*Ukiah,*	Latin
Thomas, Monroe Hardon,	*Palo Alto,*	Law
Thompson, Andrew Garl,	*Needy, Or.,*	Law
Thompson, Charles Silent,	*Paso Robles,*	Zoology
Thompson, Frank Ernest,	*Palo Alto,*	Education
Thompson, Robert A.,	*Palo Alto,*	Education
Thompson, Ray Walter,	*Palo Alto,*	Economics
Thompson, William Herbert,	*Muncie, Ind.,*	Law
	Ph. B., De Pauw Univ., 1899.	
Thoms, Clifford Carlton,	*Rialto,*	Geology
	A. B., Stanford, 1901.	
Thomson, Austin McKee,	*Palo Alto,*	Geology and Mining
Tipton, Will S.,	*Phœnix, Ariz.,*	History
	LL. B., Univ. of Indiana, 1893.	
Toll, Asahel Clark,	*Baldwinsville, N. Y.,*	Civil Eng.
Toll, Maria Louise,	*Baldwinsville, N. Y.,*	History
Townsend, Percy Seymour,	*Palo Alto,*	Geology
	A. B., Stanford, 1900.	
Townsend, Vera,	*Palo Alto,*	Latin
Trader, Harrold,	*Palo Alto,*	Latin
Trader, Kittie Louise,	*Palo Alto,*	Rom. Lang.
Traeger, William Isham,	*Porterville,*	Law
Traphagen, Katharine Ethel,	*Pasadena,*	English
Tripp, Lydia Mae,	*Rockford, Ill.,*	History
Tritch, Walter Edwin,	*Denver, Col.,*	Chemistry
Truesdell, Amelia Woodward,	*San Francisco,*	English
Tsukamoto, Chuzaburo,	*Kyoto, Japan,*	Electrical Eng.
Tucker, Adelaide May,	*Palo Alto,*	Physiology
	A. B., Stanford, 1899; A. M., 1900.	
Tucker, Helene Bernardine,	*Manchester, Ia.,*	Latin
Turcot, Josephine May,	*Santa Cruz,*	Rom. Lang.
	A. B., Stanford, 1901.	
Turner, Bessie Kathleen,	*Paso Robles,*	Latin
Turner, James Ernest,	*Kansas City, Mo.,*	Chemistry
Twieg, William Charles,	*Cleveland, O.,*	Chemistry
	A. B., Stanford, 1900.	
Tynan, Maud Loretta,	*San Jose,*	History
Uri, Sol,	*San Francisco,*	Chemistry
Vandeventer, Thomas Lloyd,	*Mount Sterling, Ill.,*	Law
Van Dine, Melvin Everett,	*Cupertino,*	Law
Van Dorn, Agnes Augusta,	*Palo Alto,*	Latin

Van Norden, Maximilian Langdon, *Sacramento,* Geology
Van Uxem, Louise, *Oakland,* History *Sp.*
Vaughn, Anna Bonfoy, *Palo Alto,* German
B. L., Univ. of Minnesota, 1884.
Vincent, Lyla Jeanette, *San Francisco,* History
Vinyard, Helen Plato, *Los Angeles,* Physiology
A. B., Stanford: 1901.
Vorhes, May Earhart, *San Diego,* English
Wagner, Fletcher Bernard, *Indianapolis, Ind.,* History
Wagner, Juliet Antoinette, *San Francisco,* Latin
Waite, Charles Edgar, *Riverside,* Economics
Waldo, Lotta, *San Jose,* German
Walker, Abraham Lincoln, *Eureka,* Education
B. S., San Joaquin Valley Coll., 1887.
Walker, Anna Martha, *Glen Moore, Pa.,* Latin
A. B., Bryn Mawr Coll., 1895.
Walker, Edna Rawlings, *Palo Alto,* German
Walker, Henry Earl, *Vineyard Haven, Mass.,* Mechanical Eng.
Walker, Lon Cain, *Palo Alto,* Mathematics
Ph. B., Ohio State U., 1893; A. M., Univ. of Nebr., 1896; A. B., Stanford, 1900.
Walker, William Lester, *Monrovia,* Geology
Wallace, Anna Theresa, *Palo Alto,* Latin
A. B., Stanford, 1899.
Wallace, Wilma Virginia, *Denver, Col.,* Latin
Walling, William Benson, *Erie, Pa.,* English
Walter, Herbert David, *San Francisco,* English
A. B., Stanford, 1901.
Wanzer, Florence Helena, *Santa Cruz,* English
Ward, Edith Grace, *Morgan Hill,* Drawing
Wardall, Clarence Marion, *Palo Alto,* Law
Waring, Gerald Ashley, *Fallbrook,* Geology
Warren, Eugene, *Silver City, N. M.,* Law
Washburn, Jessica Thompson, *San Jose,* English
Waterman, Flora Sara, *Palo Alto,* History
Waterman, William Arthur, *Palo Alto,* Mechanical Eng. *Sp.*
Watson, Arthur Barry, *San Francisco,* History
Webster, Hazel Hope, *Palo Alto,* English
Weddle, Walter Ethelbert, *Dinuba,* Chemistry *Sp.*
Weh, Edna Geneva, *Plymouth, O.,* English
B. L., Ohio Wesleyan Univ., 1891.
Weihe, Harry Augustus, *San Francisco,* Law
Weir, Mabel McQueen, *Boone, Ia.,* Class. Philology
Welch, Luvenia Rachael, *Palo Alto,* German

Weld, Ada May,	*Evergreen,*	Physiology
Welges, Eleanor Kathrine,	*Woodland,*	Class. Philology
A. B., Stanford, 1901.		
Weller, Fanny Emily,	*Waitsburg, Wash.,*	English
Wellman, Anna Winifred,	*Carlsbad,*	English *Sp.*
Wells, Frank Clinton,	*San Andreas,*	Law *Sp.*
Wells, George Summers,	*San Jose,*	Chemistry
Wertheimer, Leo Justin,	*San Francisco,*	Economics
Wheeler, Alice Clara,	*Palo Alto,*	English
Wheeler, Eva Marian,	*Monrovia,*	English
Wheeler, Frank R.,	*Tacoma, Wash.,*	Mechanical Eng. *Sp.*
Wheeler, Richmond,	*Albany, Ore.,*	Chemistry
B. S., Albany Coll., 1891.		
Wherry, Edith Margaret,	*Wellesley, Mass.,*	English
Whitaker, William Franklin,	*Lebanon, Ind.,*	Civil Eng.
White, Joseph Ephriam,	*Santa Barbara,*	Geology
White, May Houghton,	*Cathay,*	Zoology
Whitlock, Walter Adison,	*Berkeley,*	Law *Sp.*
Whitmore, Charles Abbott,	*Oxnard,*	English
Whitmore, Helen Isabel,	*Eureka, Nev.,*	History *Sp.*
Whitmore, Herbert Marcellus,	*San Jose,*	Electrical Eng.
Whitney, Frederick Eli,	*San Jose,*	English *Sp.*
Whittier, Wilmot Edgar,	*Riverside,*	Mathematics
†Wier, Jennie Elizabeth,	*Reno, Nev.,*	History
Wiggins, Carl Edward,	*Syracuse, N. Y.,*	Latin
Wigle, Keith Elihue,	*Palo Alto,*	Economics
Wigle, Ruby Beatrice,	*Palo Alto,*	German
A. B , Stanford, 1901.		
Wilbur, Ray Lyman,	*Palo Alto,*	Physiology
A. B., Stanford, 1896; A. M., 1897; M. D., Cooper Medical Coll., 1899.		
Wilbur, Theresa May,	*Riverside,*	Mathematics
Willard, Mason Corthell,	*Long Beach,*	English
Williams, Ansel Smith,	*Stockton,*	Law
Williams, Edwin Henry,	*San Jose,*	Economics
Williams, George Morgan,	*Palo Alto,*	English
B. S., New Mexico Coll. of Agr. and Mech. Arts, 1898.		
Williams, William Alfred,	*San Miguel,*	Geology
Wilson, Jessica Anna,	*Santa Monica,*	German
Wilson, Joseph Elmer,	*Oakland,*	English
Wison, Lida,	*Vallejo,*	History
A. B., Stanford, 1901.		
Wilson, Louise Suzanne,	*San Francisco,*	English
Ph. B., Univ. of California, 1897; A. M., Stanford, 1900.		

† In Absentia.

Wilson, Orrin Allen,	*Clinton, Ia.,*	Economics
Wilson, Ruth Ivins,	*Hastings, Neb.,*	English
	A. B., Univ. of Nebraska, 1900.	
Wilson, Samuel Mountford,	*San Francisco,*	Law
Wiltz, Bertha Amelia,	*San Jose,*	Physiology
Winans, Claude,	*San Jose,*	Law
Wintler, Carl Butler,	*Portland, Ore.,*	Law
Wisehart, Lon Kirby,	*New Castle, Ind.,*	Law *Sp.*
Wolcott, Oliver George,	*Palo Alto,*	Economics
Wolff, Marcus,	*San Francisco,*	Economics *Sp.*
Wolters, Sophia Juliane,	*San Francisco,*	German
Wood, Elsie Maude,	*Palo Alto,*	History
Wood, Walton Jones,	*Merced,*	Law
Wood, William Christopher,	*Elmira,*	History
Wood, Winifred,	*Palo Alto,*	History
Woodward, Amy Meredyth,	*Detroit, Mich.,*	English
Woolley, Edward,	*Wawona,*	Mining Engineering *Sp.*
Woolley, John Rea,	*Chicago, Ill.,*	Drawing
Wooster, Charles Bassett,	*Eden Vale,*	Law
Wootten, Joseph Bivens,	*Linden,*	Education
Worstell, Harrold Egbert,	*Wallace, Idaho,*	History
Worstell, Lawrence Evert,	*Wallace, Idaho,*	Law
Yerington, Henry Herbert,	*Carson, Nev.,*	Physiology
Yoch, Bertha Mary,	*Santa Ana,*	German
Yoch, Elizabeth Clementine,	*Santa Ana,*	Latin
Yoch, Josephine Rose,	*Santa Ana,*	Classical Phil.
	A. B., Stanford, 1901.	
Yoshimi, Masashi,	*Tokio, Japan,*	Education
Yoshioka, Swazo F.,	*San Francisco,*	Civil Eng.
Young, Charles Newton,	*Pomona,*	Civil Eng.
Young, Harriet Marland,	*Agnew,*	Mathematics
Young, John Quigley,	*Fort Jones,*	Physiology
Young, Waldemar,	*Salt Lake City, Utah,*	English
Younger, Herbert Lane,	*Palo Alto,*	Chemistry
Zilisch, Ina Antoinette,	*Mayville, Wis.,*	German
Zint, Harry Lee,	*Denver, Col.,*	Latin
Zschokke, Arthur Jacob,	*Palo Alto,*	Mechanical Eng.
Zucker, Emmabelle Hudson,	*Oakland,*	English

SUMMARIES

OFFICERS

Trustees		16
Faculty—		
Professors	34	
Associate Professors	19	
Assistant Professors	22	
Instructors	26	
Assistants	32	
Lecturers	3	136
Other Officers		21

STUDENTS

In Graduate Standing	117
Undergraduates	1119
Special Students	153
Total (women: 1st semester, 479; 2d semester, 447)	1389

By Major Subjects

Major Subjects	Graduate	Undergraduate	Special	Total	*No. Students taking work	*Sum of all class lists
Greek	3	14	1	18	137	159
Latin	11	64	2	77	130	221
Classical Philology	1	12	—	13	—	—
German	5	50	9	64	409	554
Romanic Languages	5	34	8	47	267	357
English	16	160	24	200	567	816
Philosophy	—	4	1	5	166	177
Psychology	—	1	1	2	43	51
Education	5	42	13	60	269	382
History	15	116	12	143	471	774
Economics	2	68	8	78	320	514
Law	16	152	27	195	161	381
Drawing	—	13	2	15	56	61
Mathematics	6	28	1	35	225	327
Physics	3	9	—	12	97	116
Chemistry	2	59	5	66	186	265
Botany	3	8	2	13	57	67
Hygiene	1	—	2	3	535	569
Physiology	7	75	11	93	104	170
Zoology	7	25	4	36	240	286
Geology	5	84	9	98	105	196
Civil Eng	—	44	2	46	113	118
Mechanical Eng	—	17	10	27	226	245
Electrical Eng	1	33	5	39	25	49

*Second semester.

By Residence

California	936	New Jersey	3
Oregon	50	New Mexico	3
Colorado	40	Connecticut	2
Illinois	32	New Hampshire	2
Washington	32	South Dakota	2
Pennsylvania	25	Wyoming	2
Montana	17	Alabama	1
Utah	17	Alaska	1
Indiana	16	Arkansas	1
Ohio	16	Florida	1
New York	15	Indian Territory	1
Iowa	14	Kentucky	1
Arizona	13	Maryland	1
Idaho	12	Mississippi	1
Massachusetts	12	North Carolina	1
Nevada	12	Oklahoma	1
District of Columbia	10	Rhode Island	1
Nebraska	10	West Virginia	1
Kansas	9	Japan	19
Missouri	9	Canada	5
Wisconsin	9	Mexico	2
Minnesota	8	Central America	1
Hawaii	5	China	1
Texas	5	Denmark	1
Michigan	4	India	1
Tennessee	4	Holland	1

California by Counties

Alameda	41	Riverside	22
Amador	2	Sacramento	7
Butte	10	San Bernardino	38
Calaveras	1	San Benito	7
Contra Costa	2	San Diego	40
Colusa	1	San Francisco	110
Fresno	12	San Joaquin	5
Glenn	1	San Luis Obispo	13
Humboldt	21	San Mateo	31
Inyo	1	Santa Barbara	7
Kern	7	Santa Clara	312
Kings	1	Santa Cruz	16
Lake	4	Sierra	1
Los Angeles	68	Shasta	4
Madera	2	Solano	10
Marin	4	Sonoma	20
Mariposa	2	Siskiyou	3
Mendocino	7	Stanislaus	5
Merced	7	Sutter	4
Modoc	1	Tehama	1
Monterey	16	Tulare	13
Napa	13	Ventura	10
Nevada	2	Yolo	5
Orange	23	Yuba	2
Placer	1		

Degrees Conferred

MAY 30, 1900, *SEPTEMBER 14, 1900, †JANUARY 11, 1901

BACHELORS OF ARTS

LATIN

†William Pleasant Campbell,
James Gilman Coffin,
†Cynthia Edna Coleman,
†E. Royal Flint,
Joseph Jarnick,
James Francis Lanagan,
Bertha Margaret Phelps,
†Ella Moore Rider,
Lera Winn.

CLASSICAL PHILOLOGY

John Williams Palmer,
†Irvin Passmore,
†Eleanor Kathrine Welges,
†Josephine Rose Yoch,

GERMANIC LANGUAGES

Edith Parkhurst Austin,
Paul E. Biber,
†Kathrine Birdsall,
Lottie Edith Brand,
Helen Cubberley,
Emily Charlotte Dole,
Laura Johnson Emery,
†Catherine Bertha Meyer,
Isabel Linton Peck,
†Blanche Adele Scofield,
†Ruby Beatrice Wigle,
Evangeline Wilson,
Ann Bartlett Winn,
Charlotte Wirt.

ROMANIC LANGUAGES

†Georgia McKee,
†Mary Elizabeth Merritt,
Mollie Pearl Stark,
Bertha Cornelia Toombs,
†Josephine May Turcot.

ENGLISH

Edith Marion Acworth,
Zoe Sara Bartruff,
†Lee Emerson Bassett,
Alberta Bell,
Annie May Bell,
Theodora Mothe Borglum,
†Mary Lucile Caldwell,
May L. Cook,
Everly Mahin Davis,
Olive Percy Davis,
Florence Dunbar,
William Fiske Henry,
Kate Alaska Hooper,
†Edna Mary Hobson,
†Ellen Utley Lynn,
†Julia Matthews,
†Letitia Patterson,
†Mary Mabel Phelps,
Elizabeth Adelaide Pratt,
†Edythe Josephine Russ,
Harry Couch Theobald,
†Herbert David Walter.
Inez Ellen Gurnee (*Ph. B., Lawrence Univ.*),

EDUCATION

Elmer White Emmett,
Clarence Edgar Hawley,
Verne Adrian McGeorge,
Mary Alma Patterson,
†Kernan Robson (*A. B. and A. M., Harvard*),
*Mary Ellen Covington Skillings,
*James Fred Smith.

HISTORY

†Claire Grace Barnhisel,
*Walter Morten Boston,
Carl Grover Brown,
Walter Edward Byrne,
Katherine Agnes Chandler,
Mary Ethel Coblentz,
†Myrtie Conneau,
†Kathryn Helen Daly,
†Rebecca Louise Davis,
Grace Pattison Diggles,
Abbie Birch Durfee,
Clara Eloise Earl,
Haven Wilson Edwards,
Anna Graeme Fraser,
†Mary Margaret Kidder,
Thomas Lewis McFadden,
*Joanna Muriel Mullins,
†Frances Doremus Patterson,
Theodora Payne,
*Irving C. Raymond,
†Sophia Georgina Crawford Ramsey,
Marion Reynolds,
Helen Hjerleid Shelley,
Clarence Burton Strohn,
Henry Huntly Taylor,
Royall Charles Victor,
Ernest Wilson,
†Lida Wilson.

ECONOMICS AND SOCIOLOGY

Ignatius Joseph Egan,
Francis St. Joseph Fox,
Alfred B. Haslacher,
Ernest Deforest Holly,
George Gibbs Kellogg,
John Ezra McDowell,
Bernard Charles Nichols,
Henlly Shoichi Ohara,
Frederic Jewell Perry,
Frank Branch Riley,
Gilchrist Porter Roberts,
John Elbert Springer,
Daniel Ward Stadtmuller,
Gwendolyn Stewart.

LAW

*Fred Bassett Braden,
John Harvey Coverley,
William Ernest Dickson,
Samuel Francis Gaches,
Otto Henry Hahn,
Swan Taraldson Hogevoll,
John Eugene Law,
William Carr McInnis,
Chester Griffin Murphy,
*John Thomas Nourse, Jr.,
Ernest Stoddard Page,
Charles Quayle,
John Reynolds Stowe,
Hilton Richmond White,
Llewellyn Burt Wilson.

MATHEMATICS

Alice Ross Bailey,
Hugh James Boyd,
James Cullen Bryant,
Marion Emma Dannals,
Ernest Harvey Shibley,
*Lon Cain Walker (*Ph. B., Ohio State Univ.; A. M., Univ. of Nebraska.*)

PHYSICS

Arthur Jordan Edwards.

CHEMISTRY

John Endicott Chapin,
Harold Woodman Durrell,
Clifton Maupin Faris,
William Draper Harkins,
David Forbis Meiklejohn,
†Jessie Archibald Moore,
Thomas Jefferson Roesman,
Percy Seymour Townsend,
William Charles Twieg.

BOTANY

*Sarah Elizabeth Cotton (*A. B., Lake Forest Univ.*),
Harry A. Dutton,
Viola May Lake.

PHYSIOLOGY AND HISTOLOGY

*Marion Percival Broughten,
Florence Emerson,
†Louis Bangs Ferguson,
Howard Gilman Hill,
†Clara Elizabeth Hogue,
Granville Ernest Leavitt,
Clara Louise Martin,
Garth Parker,
†Helen Plato Vinyard,
Harry Isaac Wiel.

ZOOLOGY

William Fitch Allen,
†Robert Evans Snodgrass,
Helen Swett.

GEOLOGY AND MINING

Henry Herman Bell,
Hugh Rose,
†Clifford Carlton Thoms.

CIVIL ENGINEERING

*Raymond Daniel Meyer,
Will Rainwater White.

MECHANICAL ENGINEERING

†Charles Warren Cross.

ELECTRICAL ENGINEERING

George Frederick Maddock,
Arthur Harlan Stephens,
Benjamin Thomas Viall,
Marion Pishon Waite,
Lloyd Blauvelt Wickersham.

MASTERS OF ARTS

GREEK

Harold Struan Muckleston, A. B., (*Trinity Univ., Toronto*).

LATIN

Helen Borgman, A. B., (*Vassar Coll.*),
†Elizabeth Gertrude Hill, A. B., (*Univ. of Chicago*).

GERMANIC LANGUAGES

Hedwig Bertha Buss, A. B.

ROMANIC LANGUAGES

Ettilla Bethell, A. B., (*Indiana Univ.*).

ENGLISH

Lily Hohfeld, A. B., (*Univ. of California*).
Charles Lewis Story, A. B.,
Hannah Adella Tucker, A. B.,
Louise Suzanne Wilson, Ph. B. (*Univ. of California*).

EDUCATION

Newell Harris Bullock, A. B.

HISTORY

Sarah Emma Simons, A. B.

BOTANY

Dorothy Goodson Eacon, A. B.,
William Austin Cannon, A. B.,
Amina Wilson McNaughton, A. B.,
William Franklin Wight, A. B.

PHYSIOLOGY AND HISTOLOGY

Nettie Maria Stevens, A. B.,
Adelaide M. Tucker, A. B.

GEOLOGY AND MINING

Ralph Arnold, A. B.,
Carl Emil Knecht, A. B.

DOCTOR OF PHILOSOPHY

†Jefferson Elmore, A. M.

Alumni Association

ORGANIZED JUNE 15, 1892

CONSTITUTION

In order to promote the interests of the University, to secure unity among its graduates, and to foster an attachment to our *Alma Mater*, we do hereby constitute ourselves an association to be known as the Alumni Association of the Leland Stanford Junior University.

1. All persons who have received a degree from the Leland Stanford Junior University are members of this Association.

2. All members of the Faculty are honorary members of this Association.

3. The officers of this Association shall be a President; one Vice-President from each successive group of five classes (provided that when the last group shall number three classes it shall thereafter be entitled to a Vice-President); a Secretary; and a Treasurer.

4. There shall be an Executive Committee, to consist of the following persons: the Secretary and Treasurer of the Association, and three other persons chosen by the Association, one of whom shall be designated as Chairman of the Committee.

5. It shall be the duty of the Executive Committee to arrange the programmes for Alumni Day and other public occasions; to regulate the finances of the Association; to perform such other duties as may be imposed upon them; and to attend to all business of the Association not otherwise provided for.

6. The President shall be *ex-officio* a member of all committees. At each annual business meeting he shall appoint a committee of two persons to audit the Treasurer's accounts.

7. The officers and the Executive Committee shall be elected by ballot at the annual business meeting to be held on Alumni Day, a majority of all votes cast being necessary for election.

8. Any proposition to alter or amend these Articles of Association must be made at a regular meeting, and have the assent of two-thirds of the members present.

OFFICERS FOR 1900-01

President—Leslie Moulthrop Burwell, '93.

First Vice-President—Hans Frederick Blichfeldt, '96.

Second Vice-President—Charles Ernest Schwartz, '99.
Secretary—Lillian Emeline Ray, '97.
Treasurer—John Francis Sheehan, Jr., '95.
Executive Committee—Jackson Eli Reynolds, '96, Chairman; Ray Lyman Wilbur, '96; Henrietta Statdmuller, '95; Lillian Emeline Ray, '97; John Francis Sheehan, Jr., '95.

Local Alumni Associations

(As last reported)

San Francisco Association

President—John Francis Sheehan, '95.
Vice-President—Abraham Lewis, '95.
Secretary—William Elder Stuart, '95.
Treasurer—Ira Shell Lillick, '97.

San Jose Association

President—Arthur Henry Washburn, '93.
Vice-President—Alfred Barstow, '95.
Secretary—Harriet Cory, '95.
Treasurer—Charles Henry Hogg, '93.

Puget Sound Association

President—John Henry McDaniels, '95.
Secretary—Jessie Muriel Reeves, ex. '97.

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